

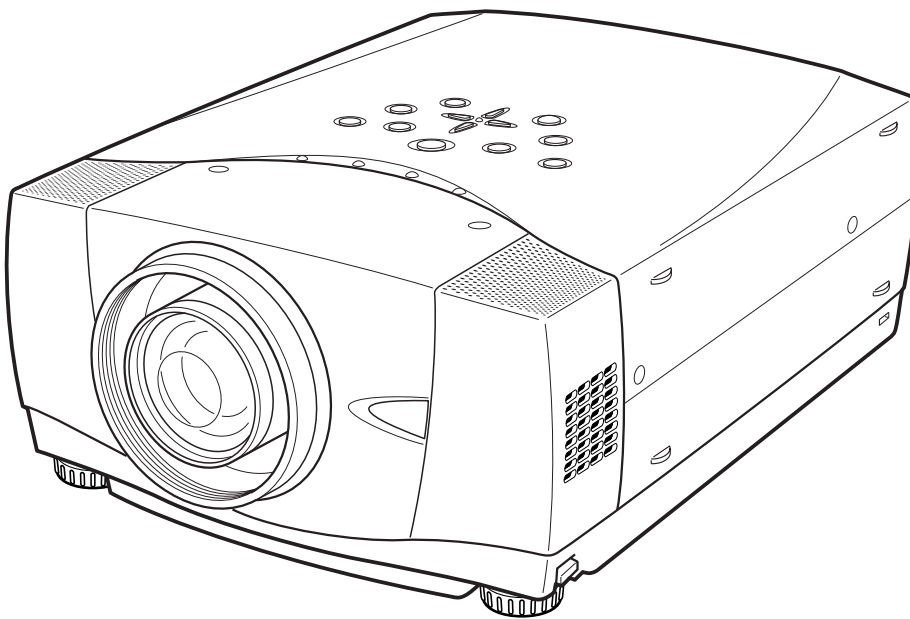
FILE NO.

## SERVICE MANUAL Multimedia Projector

Model No. PLV-70

U.S.A., Canada,  
Europe, Asia, Africa

Original Version



Chassis No. M4L-7000

**NOTE:** Match the Chassis No. on the unit's back cover with the Chassis No. in the Service Manual.

**If the Original Version Service Manual Chassis No. does not match the unit's,** additional Service Literature is required. You must refer to "Notices" to the Original Service Manual prior to servicing the unit.

### PRODUCT CODE

1 122 130 00 (M4LA)

1 122 131 00 (P4LA)

REFERENCE NO. SM5110361

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### SAFETY PRECAUTIONS

#### WARNING:

The chassis of this projector is isolated (COLD) from AC line by using the converter transformer. Primary side of the converter and lamp power supply unit circuit is connected to the AC line and it is hot, which hot circuit is identified with the line (  ) in the schematic diagram. For continued product safety and protection of personnel injury, servicing should be made with qualified personnel.

The following precautions must be observed.

1: An isolation transformer should be connected in the power line between the projector and the AC line before any service is performed on the projector.

2: Comply with all caution and safety-related notes provided on the cabinet back, cabinet bottom, inside the cabinet or on the chassis.


3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, etc.

**DO NOT OPERATE THIS PROJECTOR WITHOUT THE PROTECTIVE SHIELD IN POSITION AND PROPERLY SECURED.**

4: Before replacing the cabinet cover, thoroughly inspect the inside of the cabinet to see that no stray parts or tools have been left inside.

Before returning any projector to the customer, the service personnel must be sure it is completely safe to operate without danger of electric shock.

### PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of the projector. Components indicated by mark  in the parts list and the schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of these parts must be made by exactly the same parts.

### SERVICE PERSONNEL WARNING

Eye damage may result from directly viewing the light produced by the Lamp used in this equipment. Always turn off Lamp before opening cover. The Ultraviolet radiation eye protection required during this servicing. Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages(15kV - 25kV) at its starts. Since the lamp is very high temperature during units operation replacement of the lamp should be done at least 45 minutes after the power has been turned off, to allow the lamp cool-off.

## ■ Specifications

Projector Type	Multi-media Projector
Dimensions (W x H x D)	12.6" x 6.6" x 16.8" (319mm x 168mm x 429.5mm)
Net Weight	17.4 lbs (7.9 kg)
LCD Panel System	1.21" TFT Active Matrix type, 3 panels
Panel Resolution	1366 x 768 dots
Number of Pixels	3,147,264 (1366 x 768 x 3 panels)
Color System	6 color system (PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N)
High Definition TV Signals	480i, 480p, 575i, 575p, 720p, 1035i and 1080i
Scanning Frequency	H-sync. 15 ~ 100kHz, V-sync. 50 ~ 100Hz
Projection Image Size (diagonal)	Adjustable from 31" to 400"
Horizontal Resolution	800 TV lines (HDTV)
Projection Lens	F 1.8 ~2.1 lens with f=48.4mm ~ 62.8mm with motor zoom and focus
Throw Distance	4.6' ~ 48.3' (1.4m ~ 14.7m) (PLC-XP45), 4.6' ~ 47.3' (1.4m ~ 14.4m) (PLC-XP40)
Motorized Lens Shift	Up and Down
Projection Lamp	200 watts
Input 1 Jacks	DVI Terminal (Digital), HDB 15-pin Terminal (Analog) and Stereo Mini Type Jack (Audio)
Input 2 Jacks	BNC Type x 5 (G or VIDEO/Y, B or Cb/Pb, R or Cr/Pr, H and V), Stereo Mini Type Jack (Audio)
Input 3 Jacks	RCA Type x 3 (VIDEO/Y, Cb/Pb, Cr/Pr), RCA Type x 2 (Audio R and L) and DIN 4-pin (S-Video)
Other Jacks	DIN 8-pin (Control port), Wired Remote Jack and Network Board Connector Jack
Built-in Speakers	2 speakers Stereo (R and L), 2 watts RMS (T.H.D. 10%)
Feet Adjustment	0° to 10.5°
Voltage and Power Consumption	AC 100 ~ 120V (3.6A Max. Ampere), 50/60Hz (The U.S.A and Canada) AC 200 ~ 240V (1.8A Max. Ampere), 50/60Hz (Continental Europe and the U.K)
Operating Temperature	41 °F ~ 95 °F (5°C ~ 35°C)
Storage Temperature	14 °F ~ 140 °F (-10°C ~ 60°C)
Remote Control Transmitters	Wireless/Wired Remote Control, batteries AA, UM3 or R06 Type x 2

● The specifications are subject to change without notice.



This symbol on the nameplate means the product is Listed by Underwriters Laboratories Inc. It is designed and manufactured to meet rigid U.L. safety standards against risk of fire, casualty and electrical hazards.



## ■ Adjustments after Parts Replacement

● : Adjustment necessary ○ : Check necessary

		Disassembly / Replaced Parts								
		LCD/ Prism Ass'y	Condenser Lens	Relay Lens	Polarized glass			Power Board	Sub Power Board	Main Board
					R	G	B			
Optical Adjustments	Condenser lens adjustment	○	●							
	Relay lens adjustment	○		●						
	Contrast Adjustment									
	R-Contrast adjustment				●					
	G-Contrast adjustment					●				
	B-Contrast adjustment						●			
Electrical Adjustments	Output voltage adjustment							●		
	+16 V adjustment							●		
	Video center adjustment									●
	NRS adjustment									●
	PC pedestal adjustment									●
	PC gain adjustment									●
	Black level adjustment									●
	PC gamma shift adjustment									●
	A/D reference adjustment									●
	AV pedestal adjustment									●
	A/D input adjustment									●
	Video pedestal adjustment									●
	Video gain adjustment									●
	HDTV pedestal adjustment									●
	HDTV Gain adjustment									●
	Video gamma shift adjustment									●
	Common center adjustment	●								●
	White balance adjustment	○								○

## ■ Circuit Protections

This projector is equipped with the following circuit protections to operate in safety. If the abnormality occurs inside the projector, it will automatically turn off by operating one of the following protection circuits.

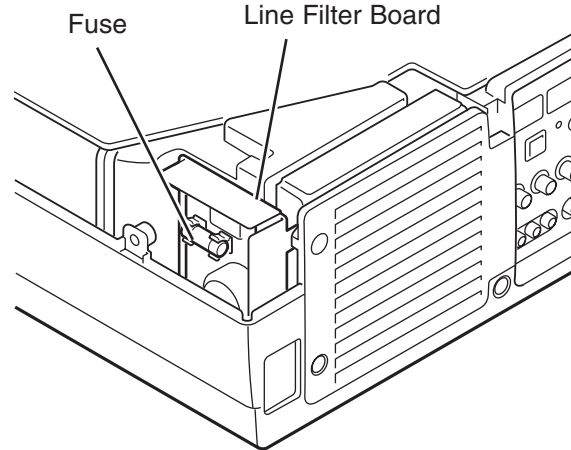
### ● Fuse

The fuse is located inside of the projector. When either the LAMP indicator or the READY indicator is not illuminated, fuse may be opened. Check the fuse as following steps.  
It should be used the specified fuse as follows;

**Fuse Part No.: 423 025 1201**  
**TYPE T8AH 250V FUSE**  
**LITTEL FUSE INC. TYPE 215008**

#### How to replace the fuse

1. Remove the cabinet top following to “Mechanical Disassemblies”.
  2. Remove the fuse from fuse holder.
- To install the fuse, take reversed step in the above.



### ● Thermal switch

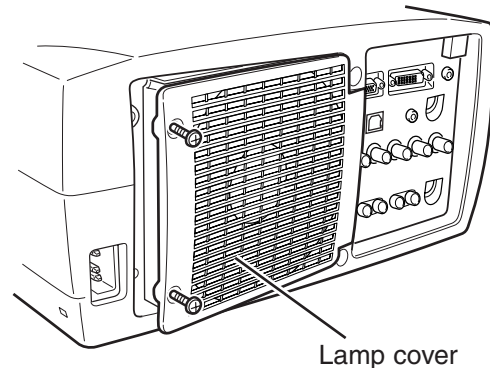
There is the thermal switch (SW905) inside of the projector to prevent the internal temperature from rising abnormally. When the internal temperature reaches near 90°C, turn off the AC main power supply automatically.

The thermal switch is not reset to normal automatically even if the internal temperature becomes normal. Reset the thermal switch following procedure.

Check the resistance between terminals of thermal switch by using the tester. If it has high impedance, thermal switch may be in operative.

#### How to reset the thermal switch

1. Loosen 2 screws and open the lamp cover.
2. Press the reset button on the thermal switch with a sharp-pointed tool.

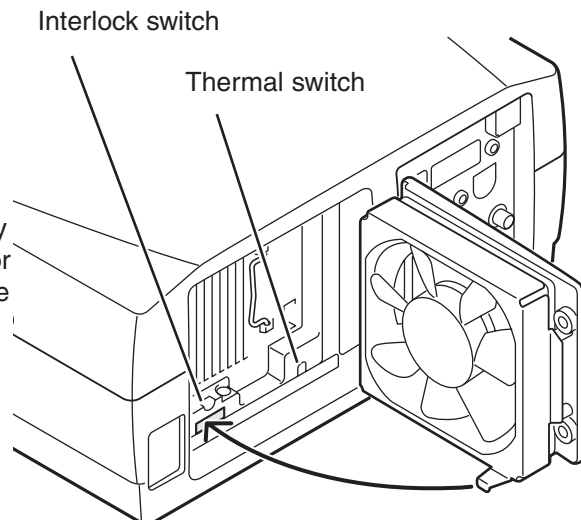


#### CAUTION:

Before press the reset button, disconnect the AC cord from the projector.

### ● Interlock switch

The interlock switch (SW902) cuts off the AC mains power supply when the lamp cover is removed. After opening the lamp cover for replacing the lamp ass'y, place the lamp cover correctly otherwise the projector can not turn on.



## ● Warning temperature and power failure protection

The TEMP WARNING indicator flashes red and the projector will automatically turn off when the internal temperature of the projector exceeds the normal temperature or when stopping cooling fans or when the internal power supply lines are failed.

Check the following possible causes and wait until stopping the TEMP WARNING indicator flashing.

### Possible causes

- Air filter is clogged with dust particles. Remove dust from the air filter by following instructions in the “Air filter care and cleaning” below.
- Ventilation slots of the projector are blocked. In such an event, reposition the projector so that ventilation slots are not obstructed.
- Check if projector is used at higher temperature place (Normal operating temperature is 5 to 35 °C or 41 to 95°F)

If the TEMP WARNING indicator still continues to flash, there may be defects on cooling fans or power supply circuits. Please check fan operation and power supply lines referring to the “Power Supply Lines Chart”.

### Air filter care and cleaning

The removable air filter prevents dust from accumulation on the surface of the projection lens and projection mirror. Should the air filter become clogged with dust particles, it will reduce the cooling fan’s effectiveness and may result in internal heat build up and reduce the life of the projector.

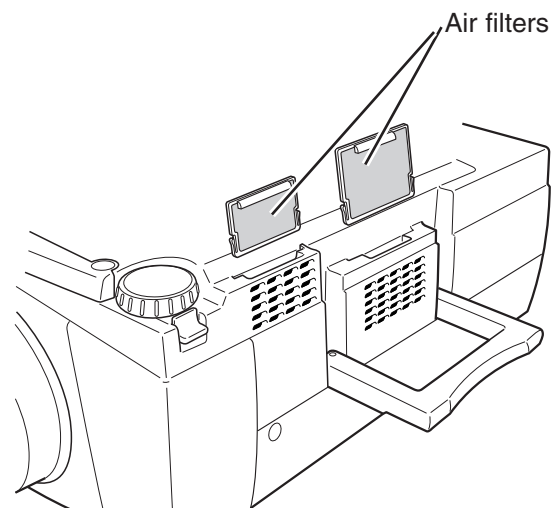
To clean up the air filters, follow the cleaning procedure below:

1. Turn the power off, and disconnect the AC power cord from the AC outlet.
2. Turn the projector up side down and remove an air filter by pulling the latches of them upward.
3. Clean the air filters with brush or wash out the dust and particles.
4. Replace each air filter properly. Make sure that the air filters are fully inserted.

### CAUTION:

Do not operate the projector with the air filter removed. The dust is stuck on the LCD panel and the mirror, and it may spoil the fine picture image.

Do not put the small parts into the air intake vents. It may result in the malfunction of the projector. The air filter is small parts. Take care that children don’t eat or swallow it.



### RECOMMENDATION

We recommend to avoid dusty, smoky place for operating the projector. Using in dusty place may cause the picture of poor quality.

When using under the dusty or smoky conditions, dust may accumulate on the LCD panel and lens inside it, and may resultantly be projected on the screen together with the picture.

When the above symptoms are noticed, please clean up the LCD panel and lens following to the “Cleaning Method”.

## ■ Mechanical Disassemblies

Mechanical disassemble should be made following procedures in numerical order.  
Following steps show the basic procedures, therefore unnecessary step may be ignored.

### Caution:

The parts and screws should be placed exactly the same position as the original otherwise it may cause loss of performance and product safety.

### 1 Cabinet Top removal

- 1 Remove 5 screws **A**, 2 screws **B**, and loosen 2 screws **C**, and then take the Cabinet Top upward off.

Note: If you want to remove the Cabinet Front-Top only, you do not need to remove screws **A**. Remove 2 screws **B** and Lens Front Cover.

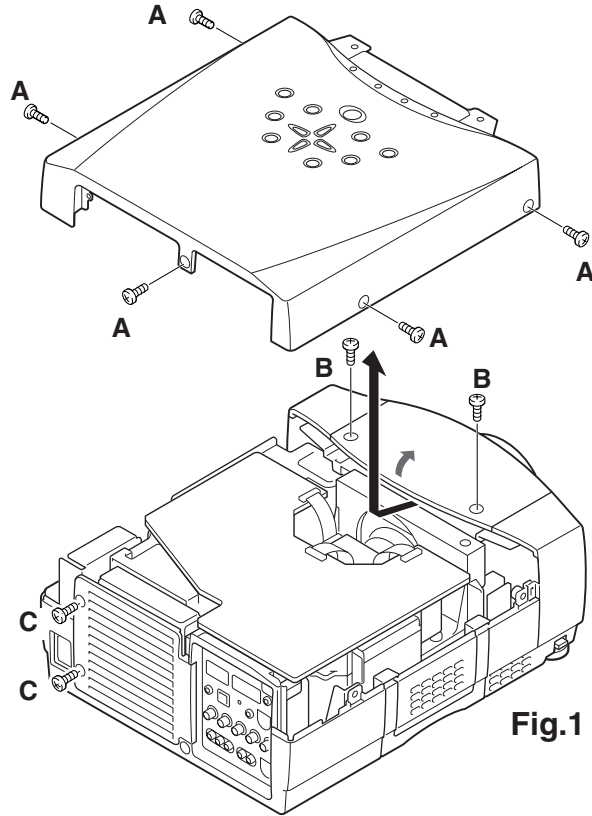


Fig.1

### 2 Cabinet Front removal

- 1 Turn the Lens Front Cover counter-clockwise and to take it off by pulling forward as shown in Fig.2-1.
- 2 Remove the Cabinet Front-Top, Lens Cover Holder and Lens Cover upward off.
- 3 Remove 2 screws **D** to take the Cabinet Front off.
- 4 Remove the RC Board and speakers on the Cabinet Front.

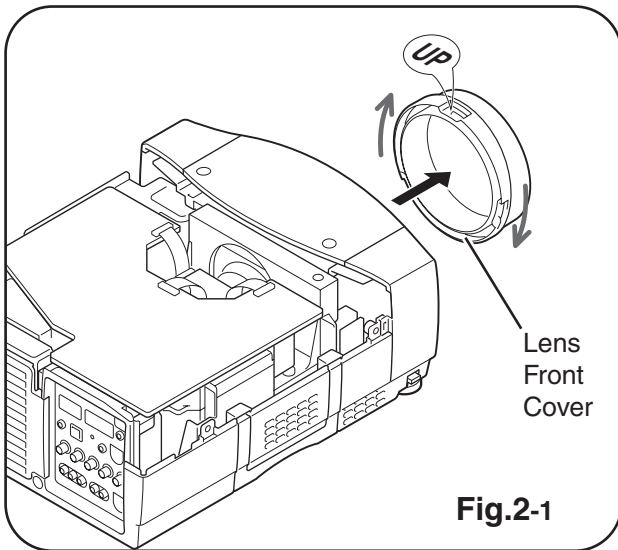


Fig.2-1

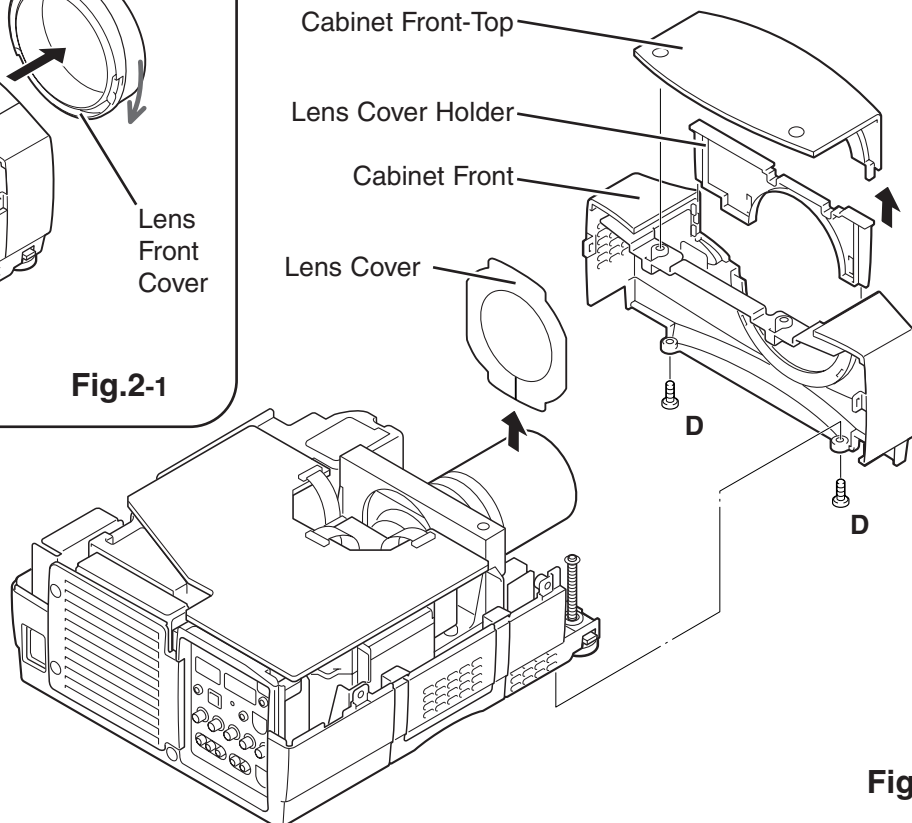


Fig.2-2

### 3 Main Board removal

- 1 Remove 7 screws to take the Main Board upward.

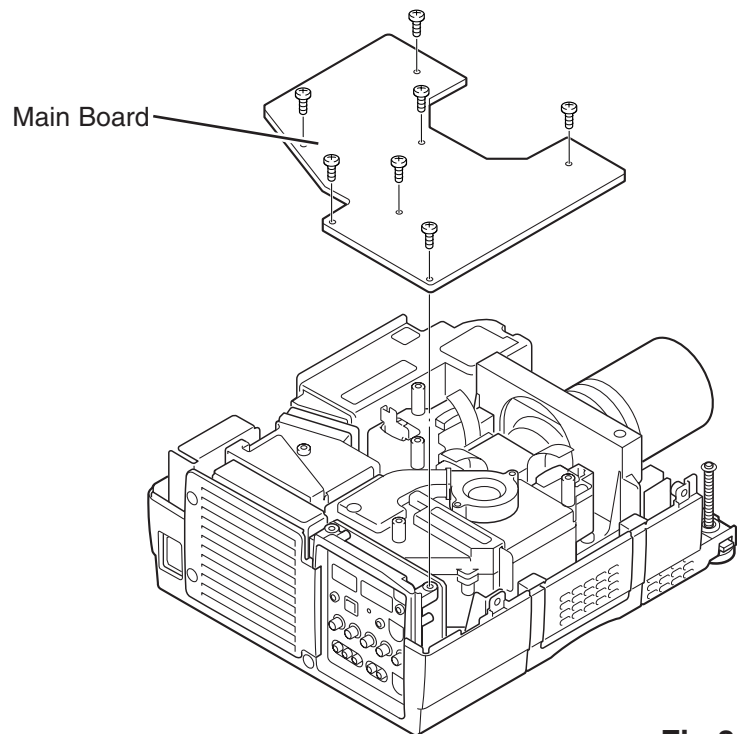


Fig.3

### 4 AV, I/F Board & Rear Panel removal

- 1 Remove 1 screw **A** and take the Rear Panel ass'y upward off.
- 2 Remove 4 screws **B** to take the fan (FN905) off.
- 3 Remove 5 screws **C** and 1 screw **D** to take AV Board from the Rear Panel ass'y off.
- 4 Remove 2 screws **E** and grounding leads and then pull up the I/F Board and Holder ass'y from the bottom cabinet.
- 5 Remove 4 screws **F** to take the I/F Board.

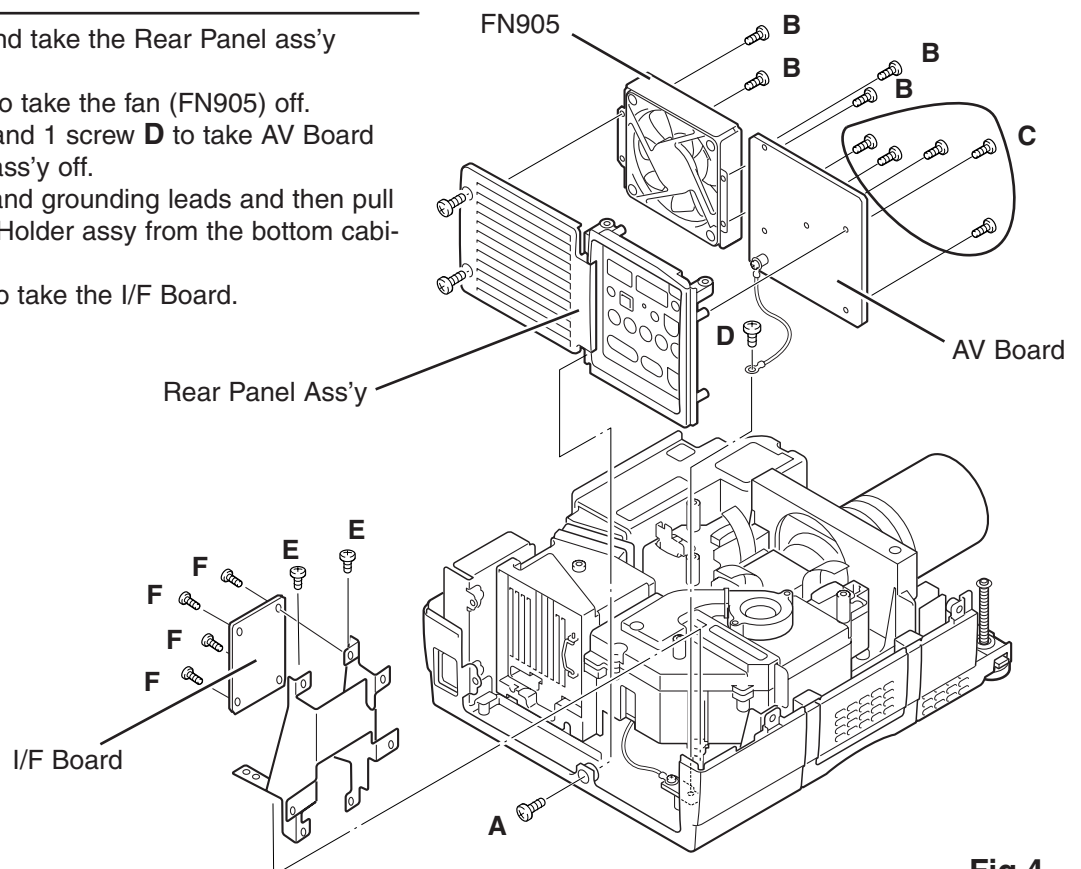


Fig.4

## 5 Lamp Ballast Unit removal

- 1 Remove 4 screws **A** to take the Ballast Cover upward off.
- 2 Remove 2 screws **B** to take the Fan (FN903) off.
- 3 Remove the Sub Power Board and Drive Board by pulling them upward.

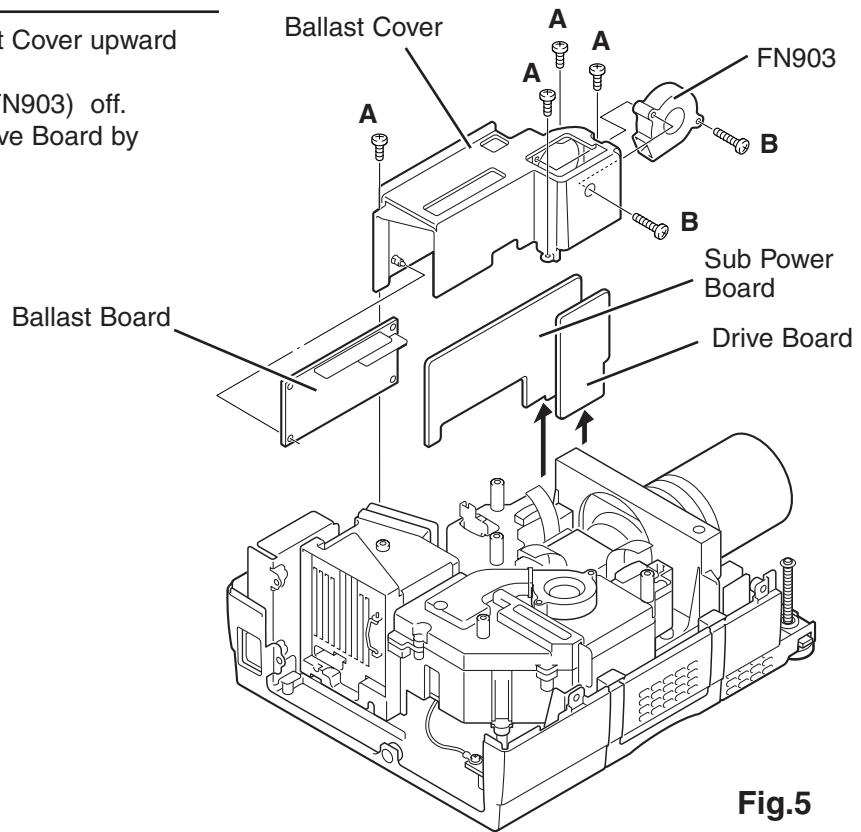


Fig.5

## 6 Optical Unit removal

- 1 Remove 2 screws **A** and 4 screws **B**(small) and pull the Optical Unit upward off.
- 2 Remove 4 screws **C** to take the Fan (FN906) off.
- 3 Remove 1 screws **D** to take the Fan (FN904) off and 2 screws **E** to take the air duct off.

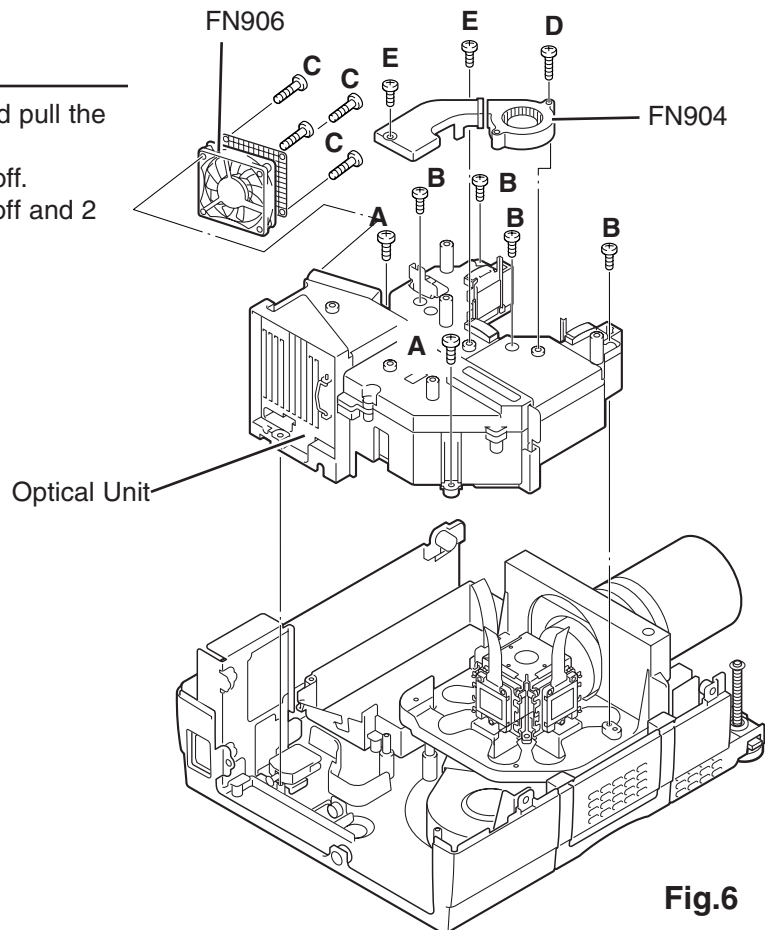


Fig.6

## 7 Prism Base removal

- 1 Remove 2 screws **A** to take the Prism Base ass'y upward off.
- 2 Remove 2 screws **B** to take the Lens Shift Motor and Sensor SW Holder from the Base.

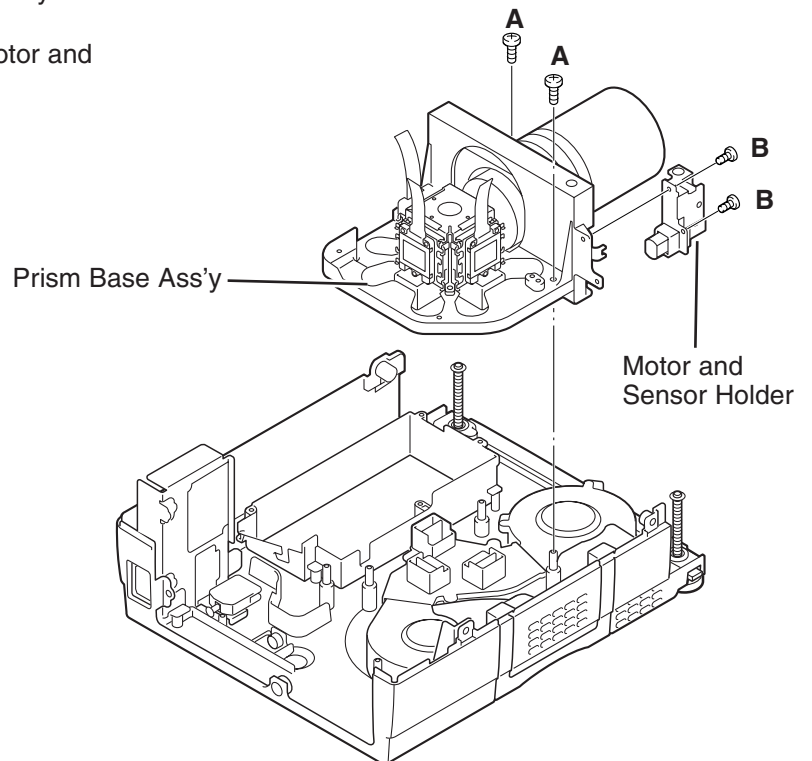


Fig.7

## 8 Power Board removal

- 1 Remove 3 screws **A** to take the Power Board off.
- 2 Remove 4 screws **B** to take Holder off from the cabinet bottom.

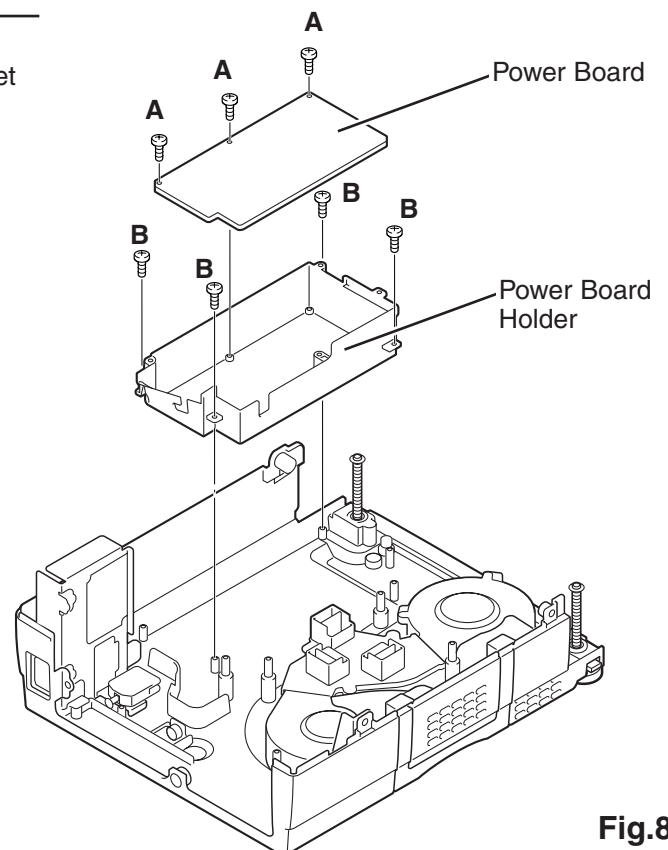


Fig.8



## 9 Line Filter Board & Interlock SW & Thermal SW removal

- 1 Remove 1 screw **A** to take Interlock Switch(SW905).
- 2 Remove 2 screws **B** to take Filter Board Holder and remove 2 screws **C** to take Filter Board from the Holder.
- 3 Remove 1 screw **D** to take Thermal Switch(SW902).

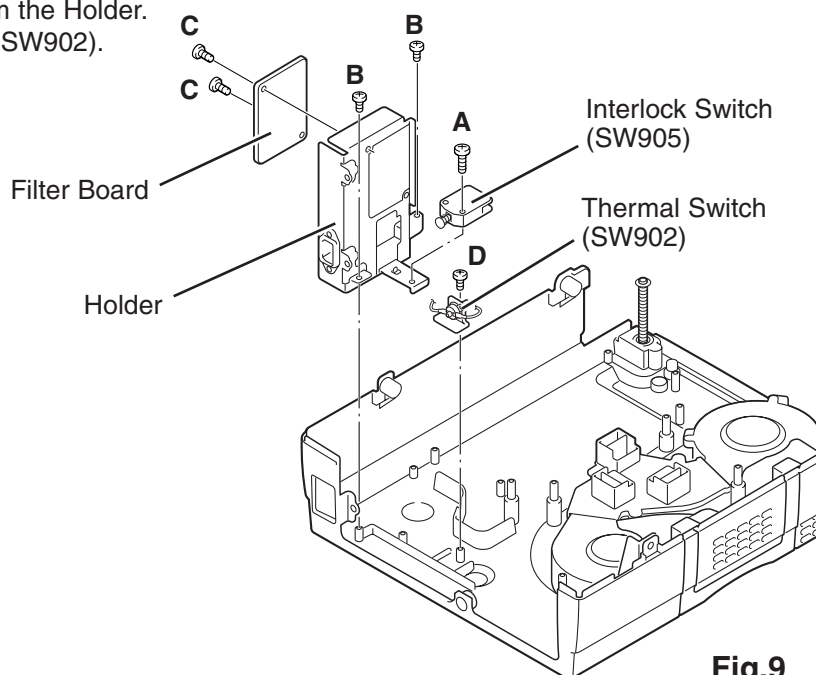


Fig.9

## 10 Fans (FN901, FN902) removal

- 1 Remove 4 screws **A** to take Air-duct Top off.
- 2 Remove 1 screw **B** (small) and 1 screw **C** (big) to take Duct Cover-A.
- 3 Remove 2 screws **D** to take Fan (FN901) off.
- 4 Remove 2 screws **E** (small) and 2 screws **F** (big) to take Air-duct-A and Fan (FN902) off.

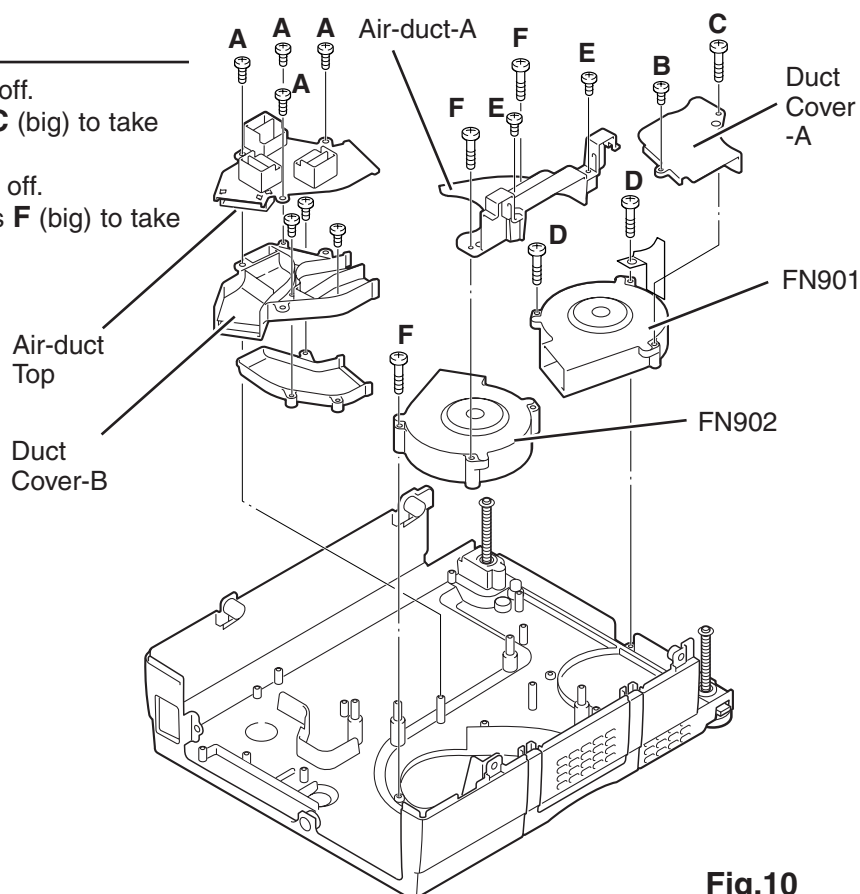


Fig.10



## ■ Optical Parts Disassemblies

Before taking this procedure, remove Cabinet Top and Main Board following to the “Mechanical Disassemblies”. Disassembly requires a 2.0mm or 2.5mm hex wrench and a slot screwdriver.

### Projection Lens removal

- 1 Remove Cabinet Front-Top following to the chapter “Mechanical Disassemblies”.
- 2 Loosen 2 screws **A** with 2.5mm hex wrench.
- 3 Unhook 2 hooks **B** on the both side of the lens and remove the Projection Lens ass’y off.

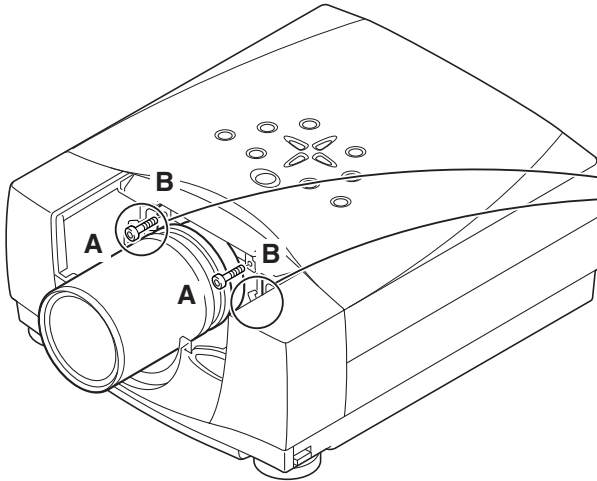


Fig.1

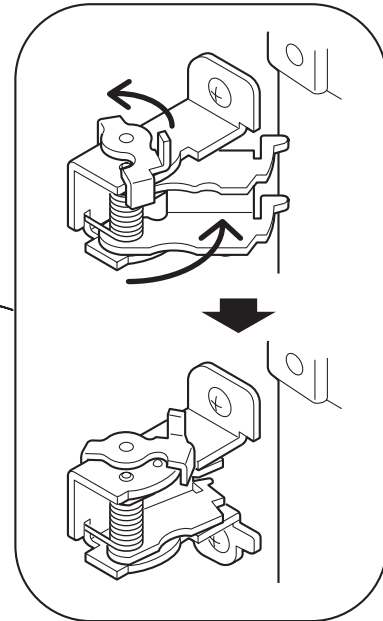


Fig.1-2

### Polarized Glass-In removal

- 1 Remove each hex screw and pull the Polarized Glass-In ass’y upward.
- 2 Remove a stopper and take the glass off upward.

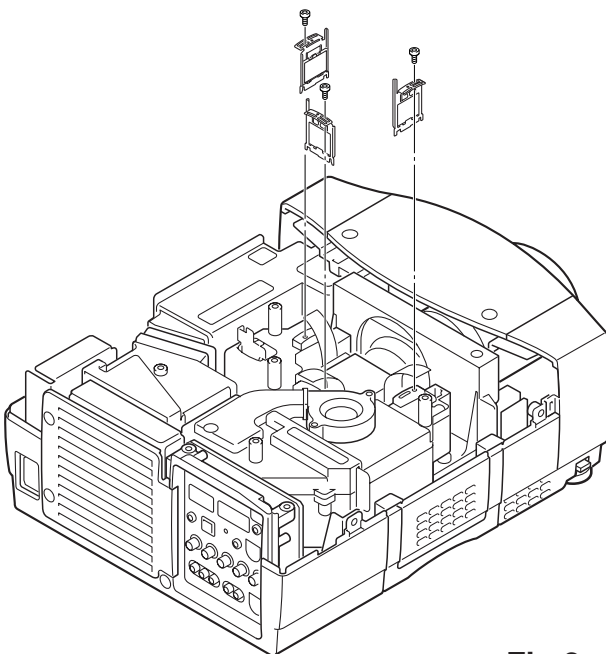


Fig.2-1

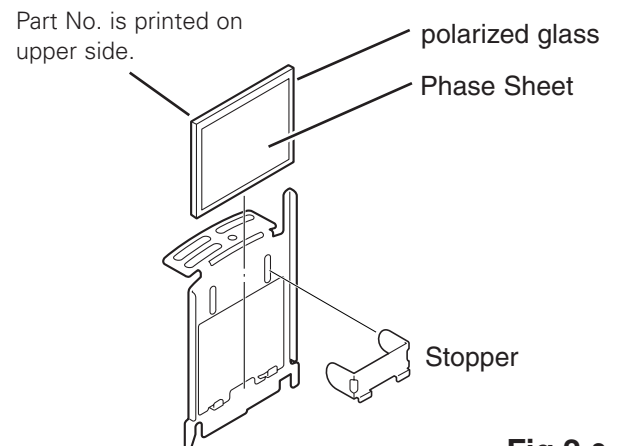


Fig.2-2

\* Glass should be placed as the printed marker comes to the upper left corner.

## Relay Lens disassembly

- 1 Remove 2 hex screws **A** and pull the Relay Lens ass'y upward.
- 2 Remove 2 screws **B** to take the Lens off from the holder.

Note:

There is no mounting direction of the lens.

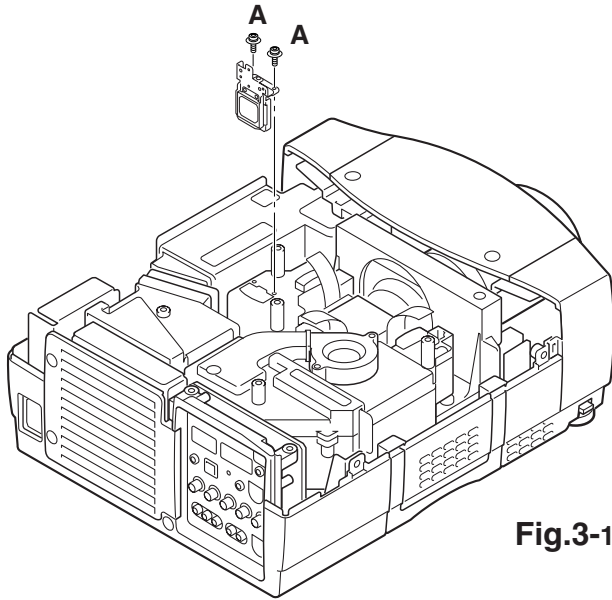


Fig.3-1

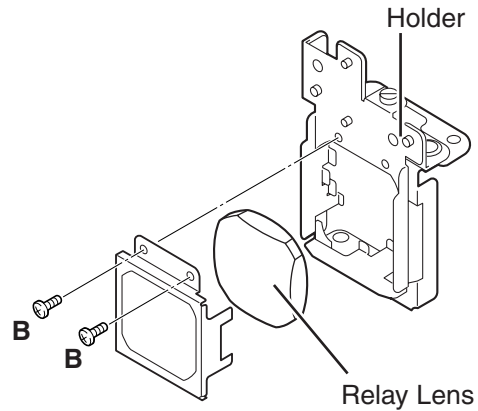


Fig.3-2

## Polarized Glass-Out and Wide view Glass removal

- 1 Remove 4 hex screws **A** and take the LCD/Prism ass'y off upward.
- 2 Remove 3 screws **B** and take the Glass Holder, and then pull the polarized Glass-Out and the wide view glass upwards off. These glasses are mounted for R, G and B LCD panels respectively.

Note:

To avoid the CG and focus alignments slipping off, please be careful to handle the LCD/Prism ass'y.

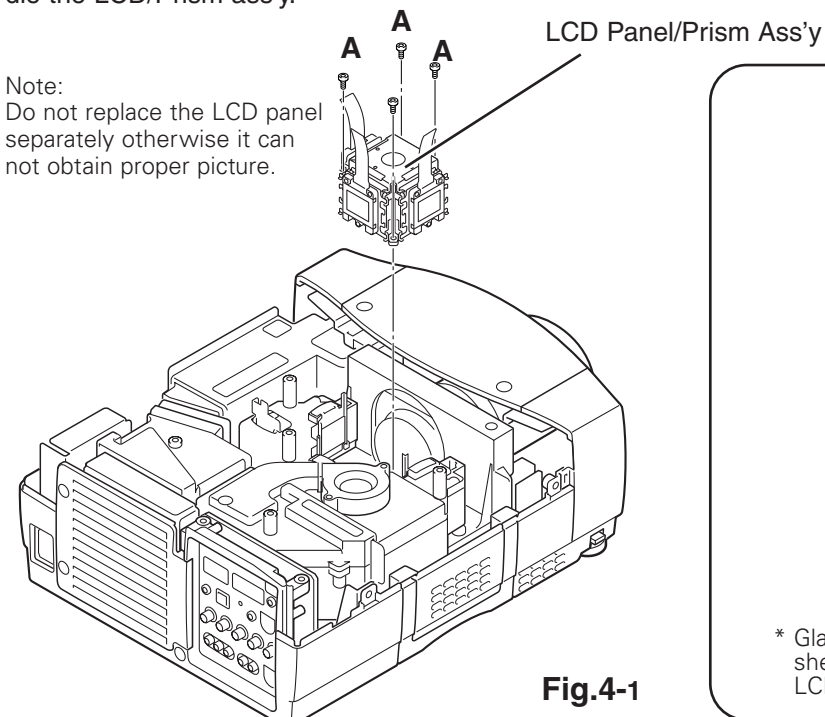
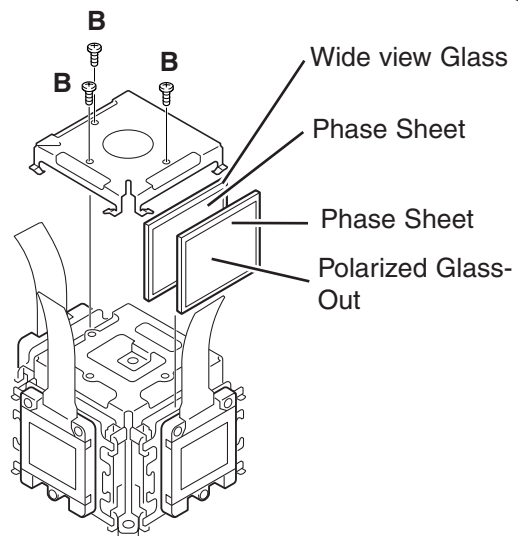


Fig.4-1

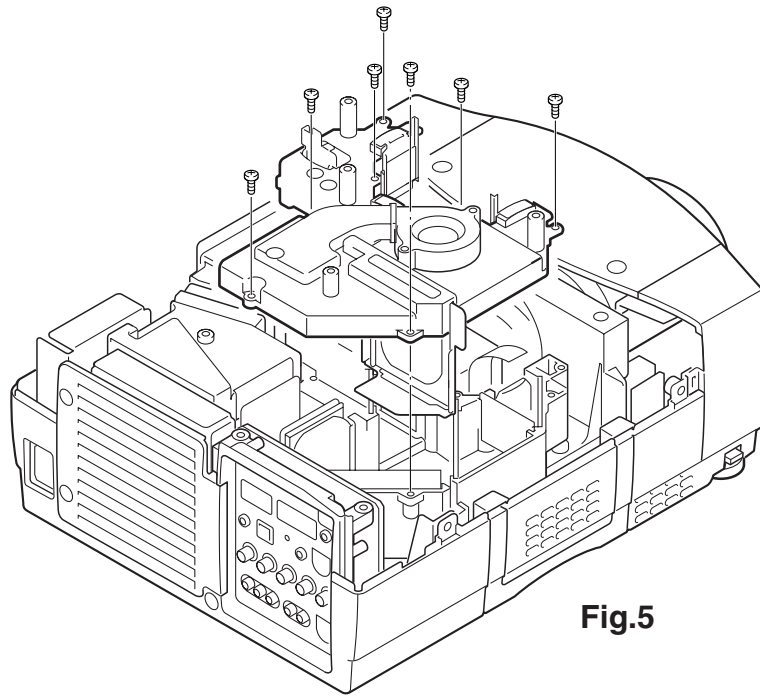


\* Glasses should be placed as the sheet attached side comes to the LCD panel side.

Fig.4-2

## Optical Unit Top removal

**1** Remove 7 screws to take the Optical Unit Top off upward.

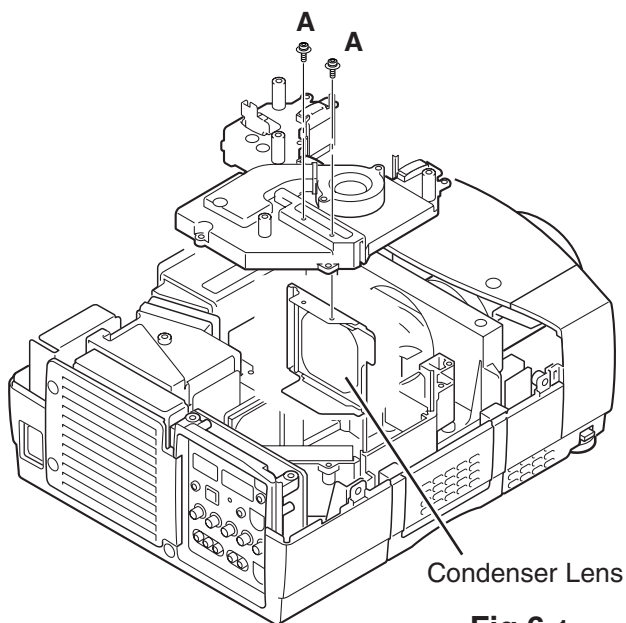


**Fig.5**

## Condenser Lens disassembly

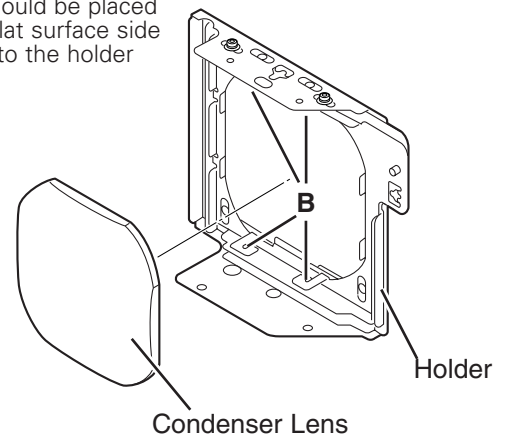
**1** Remove 2 hex screws **A** and take the Condenser Lens ass'y.

**2** Release 4 hooks **B** to take the Lens off from the holder.



**Fig.6-1**

\* Lens should be placed as the flat surface side comes to the holder side.



**Fig.6-2**

Locations and Directions

When the optical parts in the optical unit mounting or assembling, the parts must be mounted in the specified location and direction as shown in figure below.

Key No.	Description
1	Condenser lens (R)
2	Condenser lens
3	Condenser lens
4	Mirror (B)
5	Optical filter (UV cut)
6	Dichroic mirror (B)
7	Dichroic mirror (G)
8	Mirror (W)
9	Condenser lens (IN)
10	PBS (prism beam splitter)
11	Integrator lens (OUT)
12	Integrator lens (IN)
13	Relay lens (IN)
14	Mirror (R)

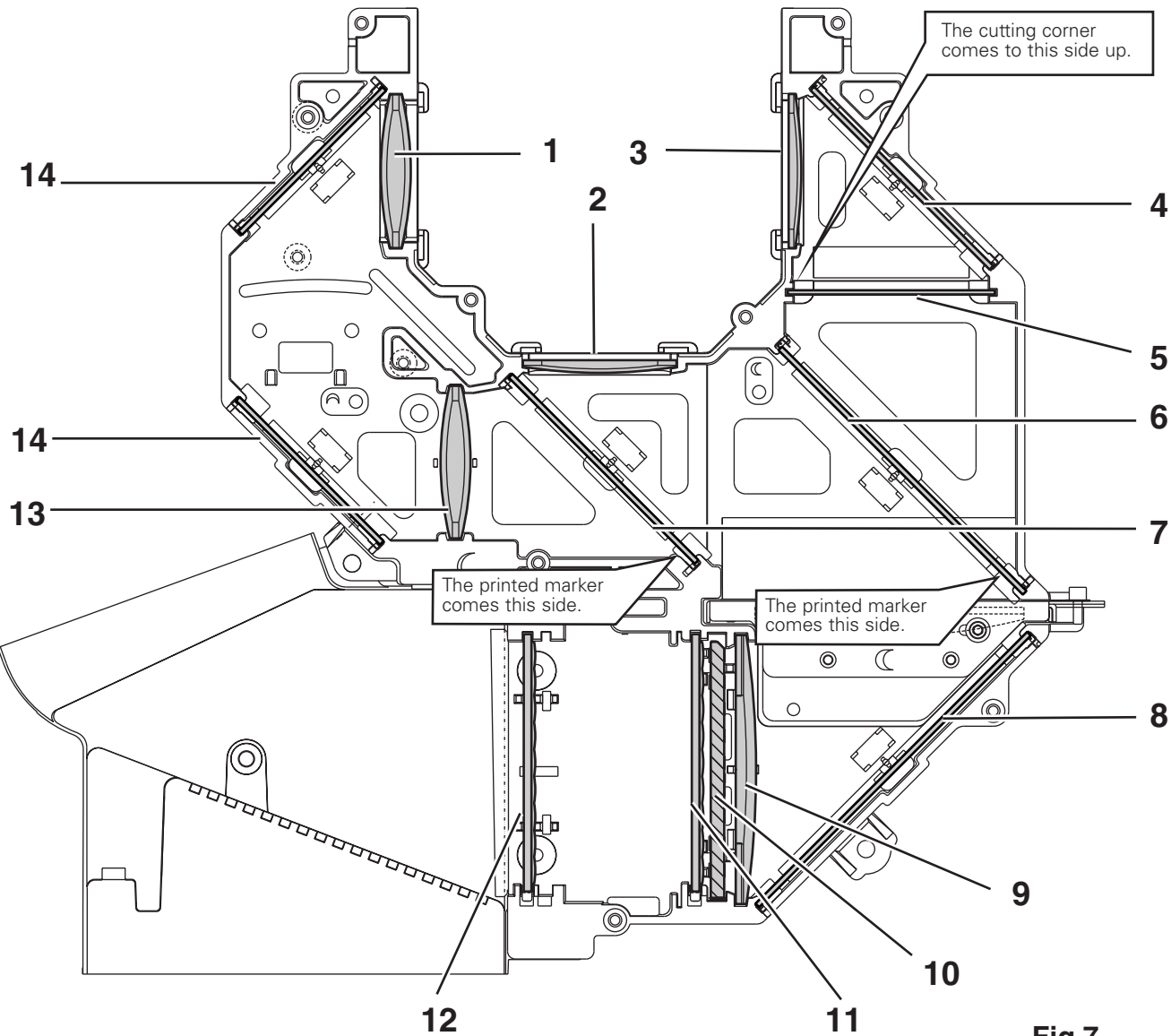


Fig.7

## ■ LCD Panel/Prism Ass'y Replacement

### IMPORTANT NOTICE on LCD Panel/Prism Ass'y Replacement

LCD panels used for this model can not be replaced separately. Do not disassemble the LCD Panel/Prism Ass'y. These LCD panels are installed with precision at the factory. When replacing the LCD panel, should be replaced whole of the LCD panels and prism ass'y at once.

After replacing LCD Panel/Prism ass'y, please check the following adjustments.

- Check the "Condenser Lens Adjustment" and "Relay Lens Adjustment" following to chapter "Optical Adjustment".
- Check the "White Balance Adjustment" and "Common Centre Adjustment" following to chapter "Electrical Adjustment".
- Check the white uniformity on the screen.

If you find the color shading, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately. The software can be ordered as follows;

#### COLOR SHADING CORRECTION SOFTWARE

Service Parts No. 645 051 2308

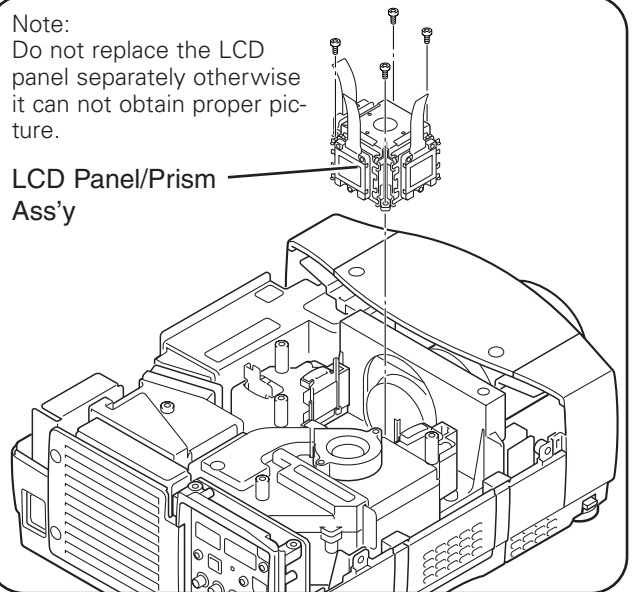
### LCD Panel/Prism Ass'y removal

- 1 Remove the cabinet top and main board following to "Mechanical Disassemblies".
- 2 Remove 4 screws by using the 2.0 mm hex driver and take the LCD Panel/Prism ass'y off upward from the optical unit.

Note:

Do not replace the LCD panel separately otherwise it can not obtain proper picture.

LCD Panel/Prism Ass'y



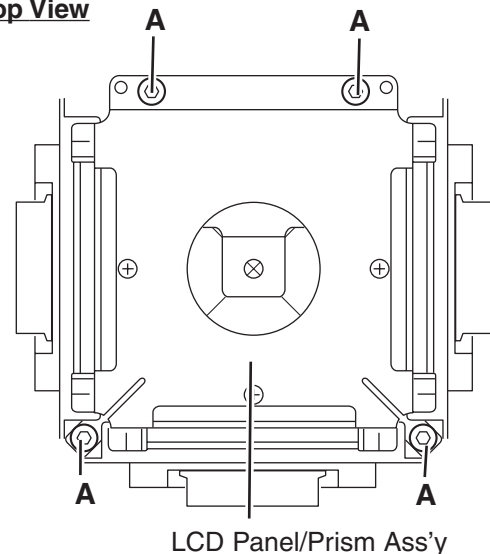
### Note on LCD Panel/Prism Ass'y Mounting

After replacing or installing the LCD Panel/Prism ass'y, please make sure to obtain the best focus in both TELE and WIDE zoom. If the focus adjustment is required, please adjust the positioning of LCD Panel/Prism Ass'y by following the below procedure.

#### Mounting Procedure:

- 1 Loosen 4 screws **A** on the LCD Panel/Prism ass'y with 2.0 mm hex driver.
- 2 Turn the projector on and project the image with WIDE zoom, and adjust the FOCUS control to obtain the best focus.
- 3 Turn the ZOOM control to the TELE position.
- 4 Move the LCD Panel/Prism Ass'y backward or forward (about 0mm ~ 0.8mm) to obtain the proper focus. Confirm the focus at TELE and WIDE zoom.
- 5 Tighten 4 screws **A** to fix the LCD Panel/Prism ass'y.

#### Top View



## ■ Lamp Replacement

### WARNING:

- For continued safety, replace with a lamp assembly of the same type.
- Allow the projector to cool for at least 45 minutes before you open the lamp cover. The inside of the projector can become very hot.
- Do not drop the lamp module or touch the glass bulb! The glass can shatter and cause injury.

### Procedure

- 1 Turn off the projector and disconnect the AC cord. Allow the projector to cool for at least 45 minutes.
- 2 Loosen 2 screws with a screwdriver and open the lamp cover.
- 3 Loosen 2 screws and pull out the lamp assembly by grasping the handle.
- 4 Replace the lamp assembly securely and tighten 2 screws.
- 5 Close the lamp cover and tighten 2 screws.
- 6 Connect the AC cord to the projector and turn on.

**7 Reset the Lamp Replace Counter, see below explanation.**

### Note:

- Do not reset the Lamp Replace Counter, except after lamp is replaced.
- The projector can not be turned-on with lamp cover removed, because when the lamp cover is removed, the interlock switch is also released to switch off the mains power for safety.

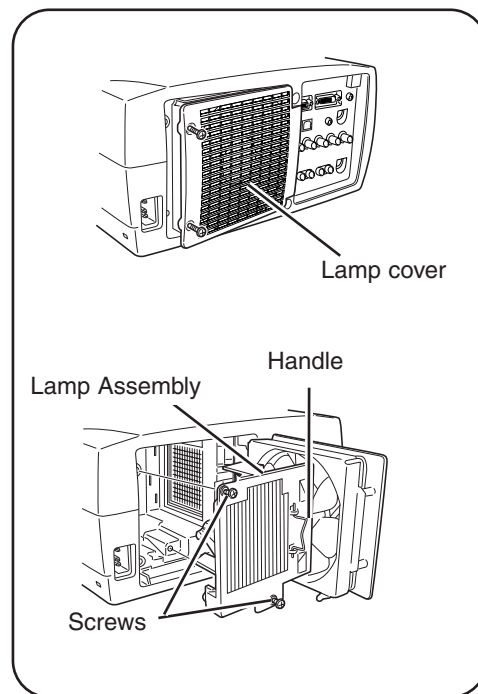
### How to reset Lamp Replace Counter

- 1 Turn the projector on, and press the **MENU** button and the on-screen menu will appear. Press the **POINT LEFT/RIGHT** buttons to move a red frame pointer to SETTING menu icon.
- 2 Press the **POINT DOWN** button to move a red frame pointer to "Lamp counter reset" and then press the **SELECT** button. The message "Lamp replace counter reset?" is displayed. Move the pointer to [Yes] and then press the **SELECT** button.
- 3 Another confirmation dialog box appears and select [Yes] to reset Lamp Replace Counter .

*Please refer to the owners manual for further information.*

### ORDER REPLACEMENT LAMP

Type No. \_\_\_\_\_ Service Parts No.  
POA-LMP38 610 293 5868



### Recommendation

Should the air filter become clogged with dust particles, it will reduce the cooling fan's effectiveness and may result in internal heat build up and short lamp life. We recommend cleaning the air filter after the projection lamp is replaced.

Refer to "Air Filter Cleaning".

### How to check Lamp Replace Counter

The LAMP REPLACEMENT indicator will illuminate when the Lamp Replace Counter reaches 1000 hours. This is to indicate that lamp replacement is required.

You can check the lamp replace counter following to below procedure.

- 1 Press and hold the pointer **UP** on the projector for more than 20 seconds.
- 2 The Lamp replace Counter service menu appears on the screen briefly. For example, when the value

of data indicates "123", the accumulated operation time is 123 hours.

Service Mode		
Input	1	
Group	No.	Data
40	0	123
Ver.	1.00	.00

**Lamp replace counter data**

## ■ Optical Adjustments

Before taking optical adjustments below, remove the Cabinet Top and Main Board following to the “Mechanical Disassemblies”

Adjustments require a 2.0mm hex wrench and a slot screwdriver.

Note: Do not disconnect connectors K8L, K8X, K8D, K8G and K8E on the main board, because the projector can not turn on due to operate the power failure protection.

### Contrast adjustment

#### [Before Adjustment]

- Input a 100% of black raster signal.

#### [R/G/B-CONTRAST ADJUSTMENT]

- 1 Loosen a screw **A** (Fig.1-1/1-2) on the polarized glass mounting base which you intend to adjust.
- 2 Turn the polarized glass mounting base as shown in Fig.1-1 to obtain the darkest brightness on the screen.
- 3 Tighten the screw **A** to fix the polarized glass mounting base.

Repeat steps 1 to 3 for remaining polarized glasses.

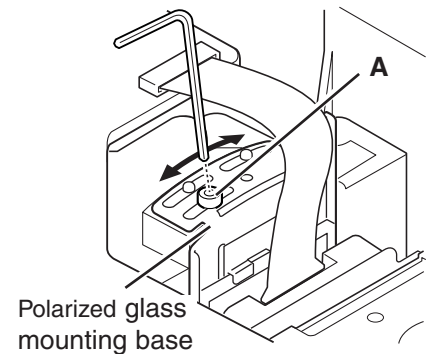


Fig.1-1

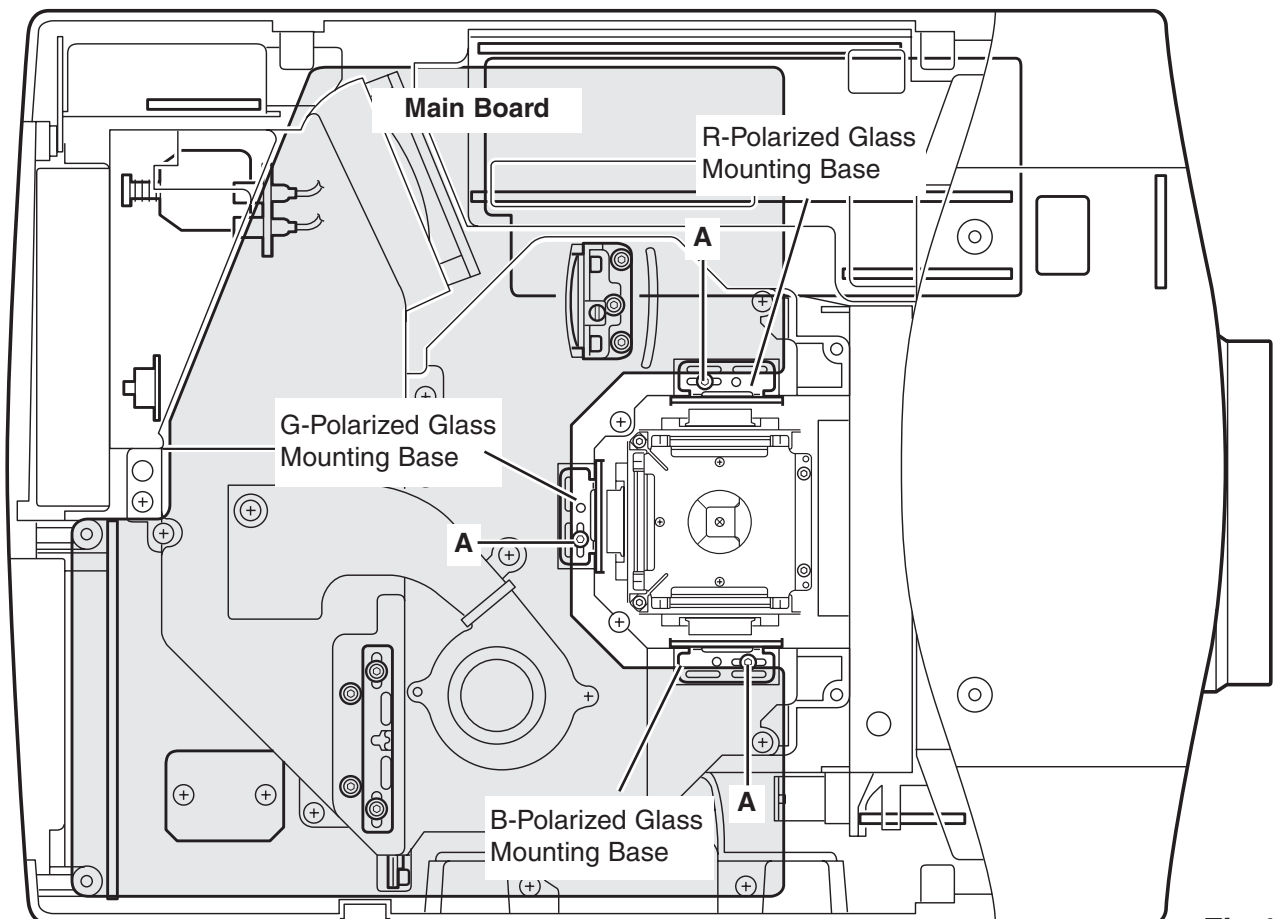


Fig.1-2

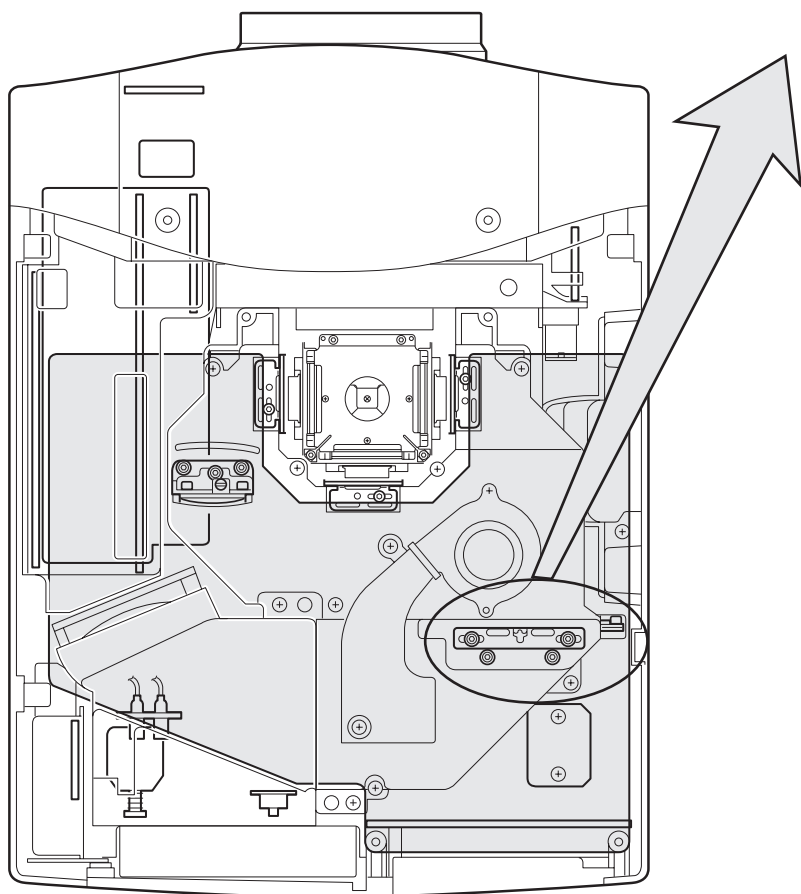
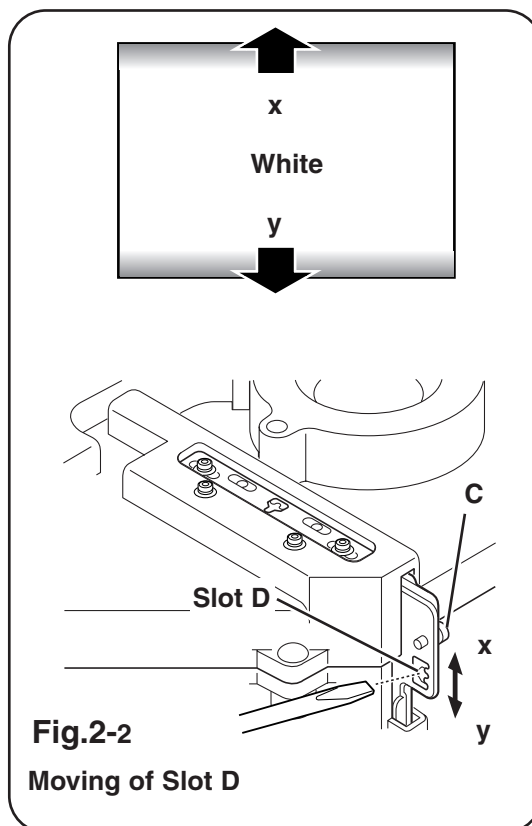
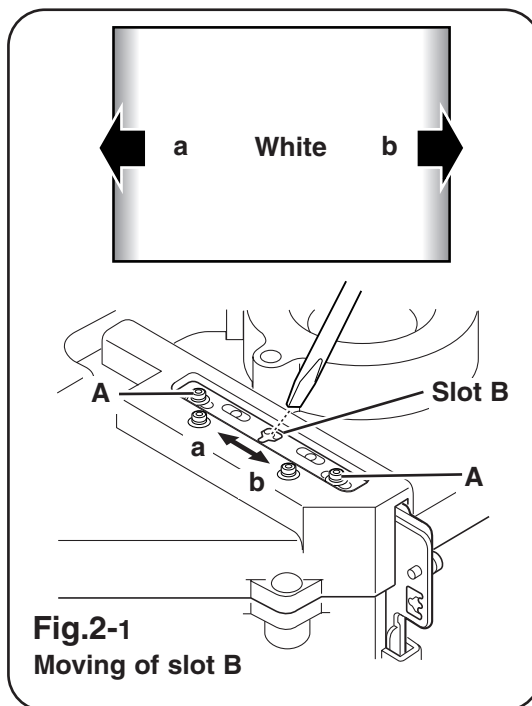


## Condenser Lens adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Adjust the adjustment base of condenser lens ass'y to make color uniformity in white.
  - 1) If the shading appears on the left or right of the screen as shown in **Fig.2-1**, loosen 2 screws **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in green by using a slot screwdriver.
  - 2) If the shading appears on the top or bottom of the screen as shown in **Fig.2-2**, loosen 1 screw **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in green by using a slot screwdriver
- 3 Tighten screws **A** and **C** to fix the Condenser lens unit.

**Note:**

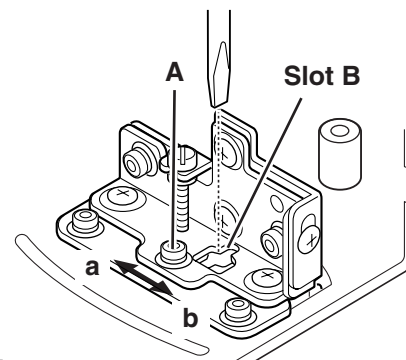
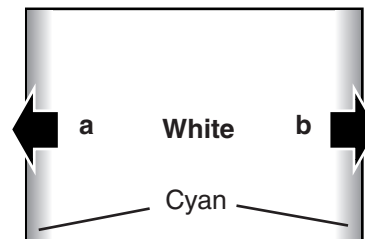
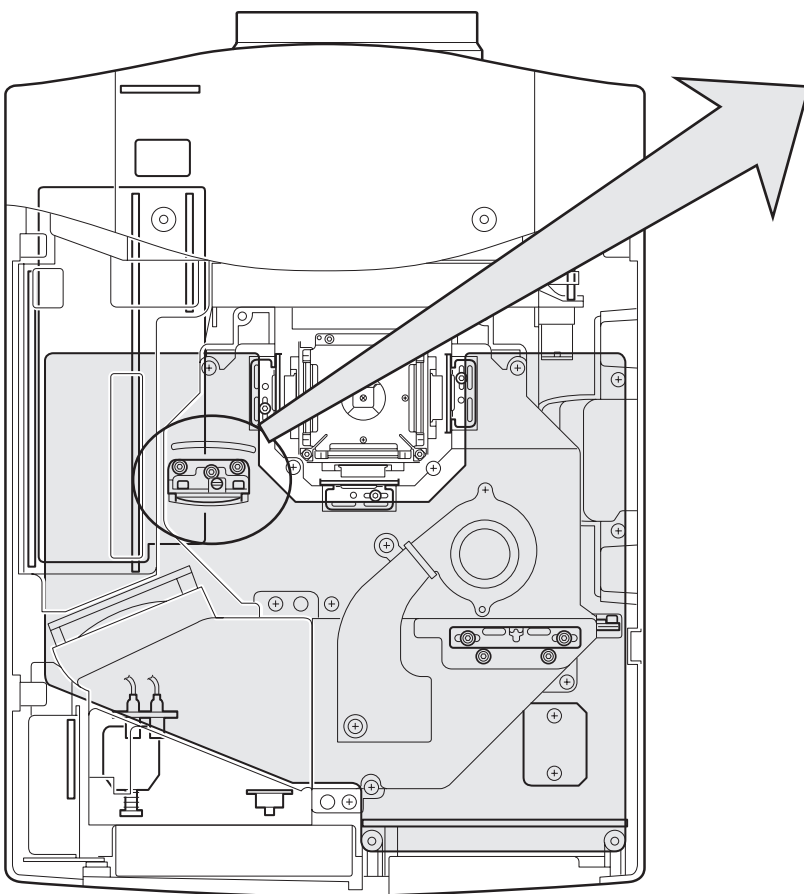
The relay lens adjustment must be carried out after completing this adjustment.



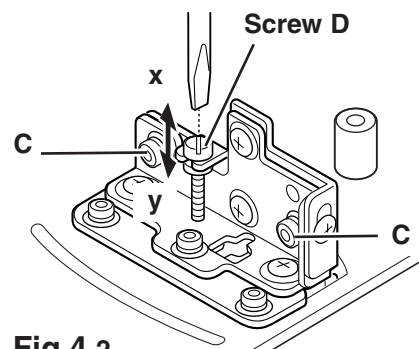
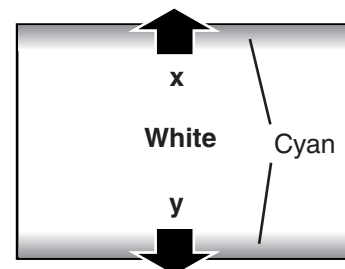


## Relay lens-Out adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Adjust the adjustment base of relay lens ass'y to make color uniformity in white.
  - 1) If the cyan bar appears on the left or right of the screen as shown in **Fig.4-1**, loosen 1 screw **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in white by using a slot screwdriver.
  - 2) If the cyan bar appears on the top or bottom of the screen as shown in **Fig.4-2**, loosen 2 screws **C** with the 2.0mm hex driver, and adjust the screw **D** to make color uniformity in white by using a slot screwdriver.
- 3 Tighten the screws **A** and **C** to fix the relay lens unit.



**Fig.4-1**  
Moving of slot B



**Fig.4-2**  
Moving of slot D

## ■ Electrical Adjustments

### ● Service Adjustment Menu Operation

#### To enter the service mode

To enter the “Service Mode”, press and hold the **MENU** and **IMAGE** button on the projector at the same time for more than 3 seconds. The service menu appears on the screen as follows.

#### To adjust service data

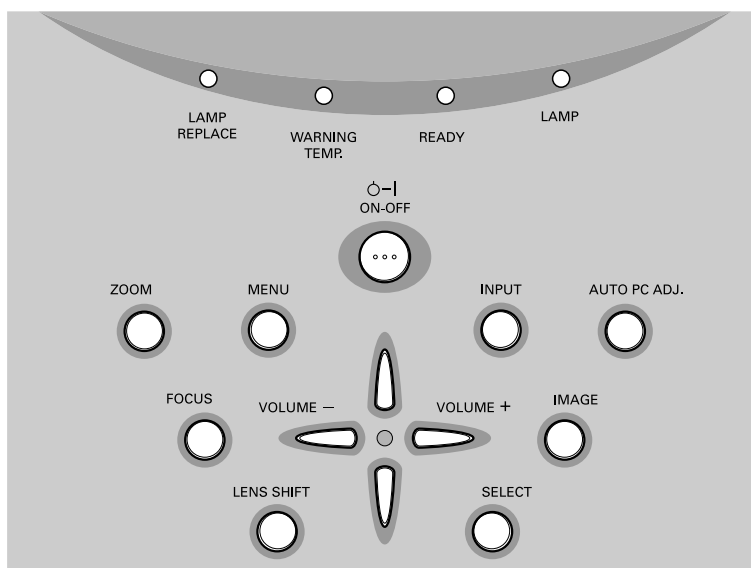
Select the adjustment group no. by pressing the **MENU** button, and select the adjustment item no. by pressing the pointer **UP** or **DOWN** button, and change the data value by pressing the **VOLUME –** or **VOLUME +** button. Refer to the “Service Adjustment Data Table” for further description of adjustment group no., item no. and data value.

#### To exit the service mode

To exit the service mode, press the **POWER ON-OFF** button on the projector or remote control unit.

Service Mode		
Input	1	
Group	No.	Data
0	0	32
Ver.	1.00	.00

Group No.      Item No.      Data value



### ● Memory IC Replacement

IC808 on the main board stores the data for the service adjustments, and should not be replaced except for the case of defective device.

If replaced, it should be performed the re-adjustments following to the “Electrical Adjustments”.

The data of lamp replacement monitor timer is stored in the IC808.

Please note that the lamp replace counter is reset when the memory IC (IC808) is replaced.

(Lamp replace counter can not be set to the previous value.)

#### ● Caution to memory IC replacement

When IC808 is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC, refer to the service adjustment table. As these data are not the same data as factory shipped data, it should be required to perform the re-adjust-

ments following to the “Electrical Adjustments”.

Please note that the lamp replace counter is reset.

#### ● Caution of Main Board replacement (in the case IC808 is not defective)

When the main board is replaced, IC808 should be replaced with the one on previous main board. After replacement, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.

In this case, the lamp replace counter can be kept the value as before.

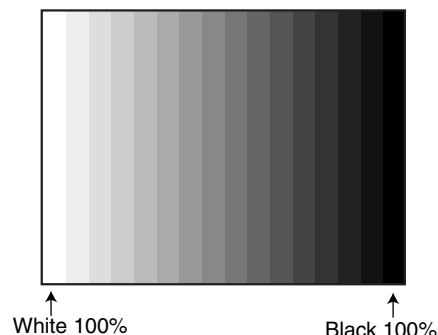
## ● Circuit Adjustments

**CAUTION:** The each circuit has been made by the fine adjustment at factory. Do not attempt to adjust the following adjustments except requiring the readjustments in servicing otherwise it may cause loss of performance and product safety.

### [Adjustment Condition]

- Input signal
  - Video signal ..... 1.0Vp-p/75Ω terminated, 16 steps gray scale (Composite video signal)
  - Computer signal ..... 0.7Vp-p/75Ω terminated, 16 steps gray scale pattern (XGA)
  - Component Video signal ..... 0.7Vp-p/75Ω terminated, 16 steps gray scale (Component video signal with 480p or 1080i format)
- Picture control mode ..... "STANDARD" mode unless otherwise noted.

16 steps gray scale pattern



### Note:

\* Please refer to "Service Adjustment Menu Operation" for entering to the service mode and adjusting the service data.

## Output Voltage adjustment

After replacing the Power Board readjust the Output voltage adjustment as follows.

1. Connect a digital voltmeter to pin 1 (+) of **K6A** and chassis ground (-).
2. Adjust the voltage by using **VR601** on the power board as following.

	AC Input	Reading
	230V	370 ±2Vdc
or	120V	340 ±2Vdc

### Caution:

Be sure to connect the lamp when taking this adjustment.

## Video Center adjustment

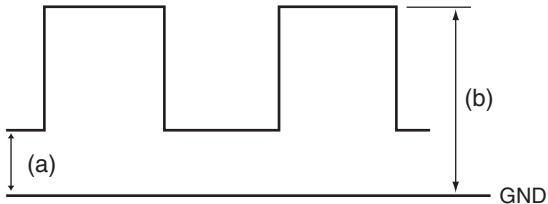
1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect a digital voltmeter to test point "**TP531**" (+) and chassis ground (-).
4. Select group no. "**11**", item no. "**0**" and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.
5. Connect a digital voltmeter to test point "**TP501**" (+) and chassis ground (-).
6. Select item no. "**1**" and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.
7. Connect a digital voltmeter to test point "**TP561**" (+) and chassis ground (-).
8. Select item no. "**2**" and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.

## +16V adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Connect a digital voltmeter to pin 3 (+) of **CN6A** and chassis ground (-).
3. Adjust the voltage to be **15.8 ±0.1Vdc** by using **VR681** on the power board.

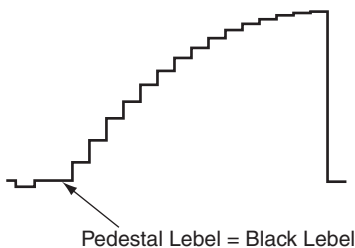
## NRS adjustment

1. Receive the a6-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP3671"** (+) and chassis ground (-).
4. Select group no. **"11"**, item no. **"3"** and change data value to adjust amplitude **"a"** to be **2.0 ±0.1V**.
5. Select item no. **"4"** and change data value to adjust amplitude **"b"** to be **7.5 ±0.1V**.



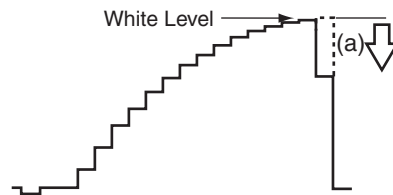
## PC Pedestal adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"500"**, item no. **"0"** and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"1"** and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"2"** and change data value to adjust the pedestal level and black level to be the same level.



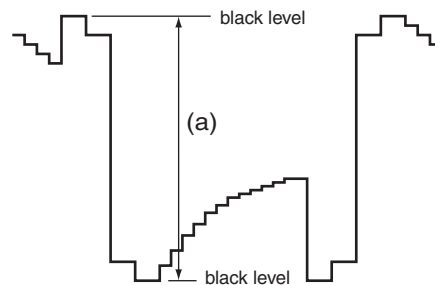
## PC Gain adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"10"**, item no. **"3"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"4"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"5"** and set data value to **"580"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.



## Black Level adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"11"**, item no. **"8"** and change data value to adjust amplitude **"a"** to be **10.0 ±0.1V**.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"9"** and change data value to adjust amplitude **"a"** to be **10.0 ±0.1V**.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"10"** and change data value to adjust amplitude **"a"** to be **10.0 ±0.1V**.



## PC Gamma Shift adjustment

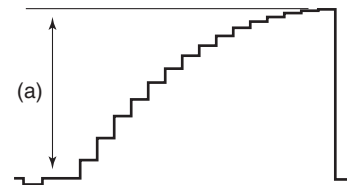
1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Select group no. "10", item no. "6" and change data value to reproduce the proper gray scale picture on the screen.

## A/D Reference adjustment

1. Receive the 16-step gray scale computer signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect a digital voltmeter to test point "TPVRB" (+) and chassis ground (-).
4. Select group no. "11", item no. "11" and change data value to adjust the voltage to be  $0.7 \pm 0.1\text{Vdc}$ .
5. Connect a digital voltmeter to test point "TPGVRT" (+) and chassis ground (-).
6. Select item no. "12" and change data value to adjust the voltage to be  $2.2 \pm 0.1\text{Vdc}$ .

## A/D Input adjustment

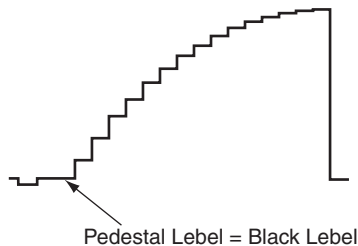
1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "TP13G" (+) and chassis ground (-).
4. Select group no. "2", item no. "1" and change data value to adjust amplitude "a" to be  $1.35 \pm 0.1\text{V}$ . If not, use item no. "1" for fine adjustment.
5. Connect an oscilloscope to test point "TP13B" (+) and chassis ground (-).
6. Select item no. "3" and change data value to adjust amplitude "a" to be  $1.35 \pm 0.1\text{V}$ .
7. Connect an oscilloscope to test point "TP13R" (+) and chassis ground (-).
8. Select item no. "4" and change data value to adjust amplitude "a" to be  $1.35 \pm 0.1\text{V}$ .



Note: This adjustment should be done after VIDEO Pedestal adjustment.

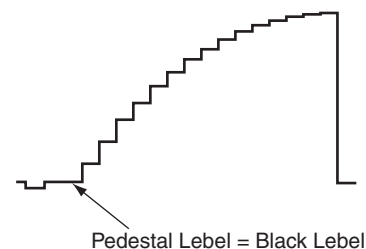
## AV Pedestal adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "TP13G" (+) and chassis ground (-).
4. Select group no. "2", item no. "0" and change data value to adjust the pedestal level and black level to be the same level.



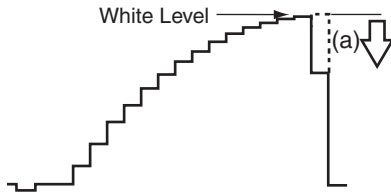
## Video Pedestal adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "TP531" (+) and chassis ground (-).
4. Select group no. "11", item no. "15" and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point "TP501" (+) and chassis ground (-).
6. Select item no. "16" and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point "TP561" (+) and chassis ground (-).
8. Select item no. "17" and change data value to adjust the pedestal level and black level to be the same level.



## Video Gain adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"10"**, item no. **"3"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"4"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"5"** and set data value to **"580"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.



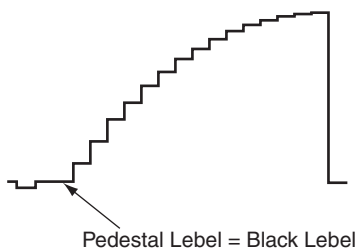
## [1080i-PEDESTAL ADJUSTMENT]

1. Receive the 16-step gray scale component signal [1080i] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"11"**, item no. **"15"** and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"16"** and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"17"** and change data value to adjust the pedestal level and black level to be the same level.

## HDTV Pedestal adjustment

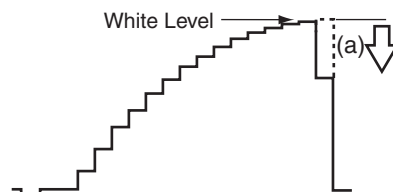
### [480p-PEDESTAL ADJUSTMENT]

1. Receive the 16-step gray scale component signal [480p] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"11"**, item no. **"15"** and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"16"** and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"17"** and change data value to adjust the pedestal level and black level to be the same level.



## HDTV Gain adjustment

1. Receive the 16-step gray scale component signal [1080i] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point **"TP531"** (+) and chassis ground (-).
4. Select group no. **"10"**, item no. **"3"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
5. Connect an oscilloscope to test point **"TP501"** (+) and chassis ground (-).
6. Select item no. **"4"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.
7. Connect an oscilloscope to test point **"TP561"** (+) and chassis ground (-).
8. Select item no. **"5"** and set data value to **"600"**, and then decrease data to adjust waveform **"a"** to be minimum amplitude.



---

## Video Gamma Shift adjustment

---

1. Receive the 16-step gray scale computer signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Select group no. “**10**”, item no. “**6**” and change data value to reproduce the proper gray scale picture on the screen.

## Common Center adjustment

---

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Project only green light component to the screen.
4. Select group no. “**11**”, item no. “**19**” and change data value to obtain the minimum flicker on the screen.
5. Project only blue light component to the screen.
6. Select item no. “**20**” and change data value to obtain the minimum flicker on the screen.
7. Project only red light component to the screen.
8. Select item no. “**18**” and change data value to obtain the minimum flicker on the screen.

---

## White Balance adjustment

---

### [PC WHITE BALANCE ADJUSTMENT]

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Select group no. “**10**”, item no. “**7**” (Red) or “**8**” (Blue), and change data values respectively to make a proper white balance.

### [AV WHITE BALANCE ADJUSTMENT]

4. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
5. Enter the service mode.
6. Select group no. “**10**”, item no. “**7**” (Red) or “**8**” (Blue), and change data values respectively to make a proper white balance.

Confirm that the same white balance is obtained in video and computer input.

### NOTE ON WHITE UNIFORMITY ADJUSTMENT

If you find the color shading on the screen, please adjust the white uniformity by using the proper computer and “Color Shading Correction” software supplied separately. The software can be ordered as follows;

### COLOR SHADING CORRECTION SOFTWARE

Service Parts No.      645 051 2308



## ● Service Adjustment Data Table

These initial values are the reference data written from the CPU ROM to memory IC when replaced new memory IC. The adjustment items indicated with “※” are required to readjust following to the “Electrical adjustments”. Other items should be used with the initial data value.

No.	Adjustment Item	Initial Value	Range	Input source / Description
<b>Group: 0 TB1274AF</b>				
0	TINT	32	0 ~ 63	Common in all systems
1	SHP_EQ	2	0 ~ 3	Common in all systems
2	SHP_F0	2	0 ~ 3	Common in all systems
3	SHP_GAIN	8/8/8/8/8/8	0 ~ 15	CVBS NT/ PAL, PALM, PALN/ SECAM, BW/ NT443/ PAL60/ YC/ YCbCr, YPbPr
4	Y_OUT_LEVEL 0.7V	31/30/30/30/32 29/29/30/30/32/32	0 ~ 63	CVBS NT/ NT443/ PAL, PALM, PALN/ PAL60/ SECAM, BW S-Video NT, BW/ NT443/ PAL, PALM, PALN/ PAL60/ SECAM/ YCbCr, YPbPr
5	C_OUT_LEVEL 0.6V	22/21/28/28 39/23/22/29 29/40/18/20	0 ~ 63	CVBS NT/ NT443/ PAL, PALM, PALN/ PAL60/ SECAM, BW S-Video NT, BW/ NT443/ PAL, PALM, PALN/ PAL60/ SECAM/ 480i/ 575i
6	Y_DELAY	5/5/4/4/4 4/4/3/3/4	0 ~ 15	CVBS NT, BW60/ PAL, PALM, PALN, BW50/ SECAM/ NT443/ PAL60 S-Video NT, BW60/ PAL, PALM, PALN, BW50/ SECAM/ NT443/ PAL60
7	COL_SYS	-	-	Read only
8	X_TAL	-	-	
9	NOISE_DET	-	-	
10	V_FREQ	-	-	
11	Vert. Std	-	-	
12	CID	-	-	
13	V_SIG	-	-	
14	NVM	0	0 or 1	
15	AFC_GAIN	1	0 ~ 3	Common in all systems
16	SECAM_GP	0	0~3	
17	SECAM_V_ID	1	0~1	
<b>Group: 1 CXA2151Q</b>				
0	VFREQ	1	0 ~ 1	Common in all systems
1	V_TC	3/0	0 ~ 3	15KHz/16KHz or more
2	H_WIDTH	2	0 ~ 3	Common in all systems
3	HSEP_SEL	1/1/0	0 ~ 1	15KHz mode/1080i, 1035i, 720p 3 value mode/480p, 575p 2 value mode
4	HD_TC	1/1/0	0 ~ 1	15KHz mode/1080i, 1035i, 720p 3 value mode/480p, 575p 2 value mode
5	HS_MASK	1/0	0 ~ 1	15KHz/ CVBS, YC, 480i, 575i/ 16KHz or more (480p, 575p, 1080i, 1035i, 720p)
6	GAIN_SEL	1	0 ~ 3	Common in all systems
7	CB_GAIN	7	0 ~ 15	Common in all systems
8	CR_GAIN	7	0 ~ 15	Common in all systems
9	Y_GAIN	7	0 ~ 15	Common in all systems
<b>Group: 2 CXA2150AQ</b>				
0	BRIGHT	35	0 ~ 63	Common in all datas ※ AV Pedestal Adj.
1	PICTURE	22	0 ~ 63	Common in all datas ※ G-A/D Input Level Adj.
2	G_DRIVE	47	0 ~ 63	Common in all datas ※ G-A/D Input Level Adj.
3	B_DRIVE	47	0 ~ 63	Common in all datas ※ B-A/D Input Level Adj.
4	R_DRIVE	47	0 ~ 63	Common in all datas ※ R-A/D Input Level Adj.
5	COL_AXIS	0/0/0/0	0 ~ 3	NTSC, NT443, 480i, BW60/ PAL, PALM, PALN, SECAM, 575i, 575p, BW50/ 1035i/ 1080i, 720p, 480p, applicated with BW50, 60
6	CTI_LEV	0/0/0/0	0 ~ 3	NTSC, NTSC443, BW60/ PAL, PALM, PALN, SECAM, BW50/ YC, 480i, 575i/ HDTV applicated with BW50, 60
7	LTI_LEV	0/0	0 ~ 3	CVBS, YC, 480i, 575i, 480p, 575p/ 1080i, 1035i, 720p/
8	DPIC_LEV	0	0 ~ 3	Common in all datas
9	CB_OFFSET	31/31	0 ~ 63	CVBS, YC/ others
10	CR_OFFSET	31/31	0 ~ 63	CVBS, YC/ others
11	SYSTEM	2/3/3	0 ~ 3	NTSC, NTSC443, PAL, PALM, PALN, SECAM, 480i, 575i, BW/ 480p, 575p/ 1080i, 1035i, 720p, applicated with BW50, 60
12	Y_OFFSET	8	0 ~ 15	Common in all datas
13	SHP_F0	1/1/1	0 ~ 1	NTSC, NTSC443, PAL, PALM, PALN, PALN, SECAM, 480i, 575i, BW/ 480p, 575p/ 1080i, 1035i, 720p, applicated with BW50, 60
14	SHP_F1	0/0/0	0 ~ 3	CVBS/ YC, 480i, 575i/ HDTV
15	PRE_OVER	1/1	0 ~ 3	CVBS, YC, 480i, 575i/ HDTV
16	UP_BLK	6/14/12/9/5/5/6	0 ~ 15	NTSC, NTSC443, PALM, 480i, BW60/ PAL, PALN, SECAM, 575i, BW50/ 480p/ 575p/ 1035i/ 1080i/ 720p, applicated with BW50, 60
17	LO_BLK	0/5/0/1/2/1/1	0 ~ 15	NTSC, NTSC443, PALM, 480i, BW60/ PAL, PALN, SECAM, 575i, BW50/ 480p/ 575p/ 1035i/ 1080i/ 720p, applicated with BW50, 60
19	CLP_SHIFT	0/0/0	0 ~ 1	CVBS, YC, 480i, 575i/ 480p, 575p/ 1080i, 1035i, 720p



## Electrical Adjustments

No.	Adjustment Item	Initial Value	Range	Input source / Description
20	AFC_MODE	3/3/3	0 ~ 3	CVBS, YC, 480i, 575i/480p, 575p/1080i, 1035i, 720p
21	CLP_PHASE	1/0/1/0/1/1/ 1/1/0	0 ~ 3	NTSC, NTSC443, PALM, BW60/PAL, PALN, SECAM, BW60/480i/575i/480p/575p/ 1080i/60, 1035i/1080i/50/720p, applicated with BW50,60
22	CLP_GATE_ON	0	0 ~ 1	Common in all datas
23	SUB_HUE	28/28/28/28/28/28/ 26/29/28/28/28/28/28	0 ~ 63	NTSC, BW60/NT443/PAL, BW50/PALM/PALN/SECAM/ 1080i/1035i/720p/575p/480p/480i/575i
24	SUB_SHP	5/6/6/6	0 ~ 3F	NTSC, NTSC443, BW50&60Hz/PAL, PALM, PALN, SECAM/YC, 480i, 575i/HDTV applicated with BW50,60
25	SUB_COL	5/9	0 ~ 63	notHDTV(CVBS, YC, 480i, 575i)/HDTV
26	CNM_HUE	0/0	0~10	Difference value from standard hue notHDTV(CVBS, YC, 480p, 575p, 480i, 575i)/HDTV
27	CNM_CTI_LVL	0/0	0 ~ 3	notHDTV(CVBS, YC, 480p, 575p, 480i, 575i)/HDTV
28	CNM_LTI_LVL	0/0	0 ~ 3	notHDTV(CVBS, YC, 480p, 575p, 480i, 575i)/HDTV
29	CNM_COL	2/4	0~8	Difference value from standard color notHDTV(incl. 480p, 575p, 480i, 575i)/HDTV
30	CNM_SHP	0/0	0~8	Difference value from standard sharpness notHDTV(incl. 480p, 575p, 480i, 575i)/HDTV
<b>Group: 3 TC90A69F</b>				
0	YEQ_GAIN	3	0 ~ 3	
1	YEQ_N_C_LIM	3	0 ~ 3	
2	V-ENH_GAIN	4	0 ~ 7	
3	V_ENH_CORING	2	0 ~ 3	
4	NTSC443_SW	1	0 ~ 1	Input signal system selection 0:NTSC4.43 1:PAL60 (only efective NTSC4.43 sig- nal input)
<b>Group: 4 uPD64083</b>				
0	NRMD	0	0 ~ 3	
1	HDP	4	0 ~ 7	
2	CDL	4	0 ~ 7	
3	DYCOR	4	0 ~ 15	
4	DYGAIN	15	0 ~ 15	
5	DCCO	2	0 ~ 15	
6	DCGAIN	13	0 ~ 15	
7	VAPGAIN	3	0 ~ 15	
8	VAPINV	2	0 ~ 15	
9	YPFT	1	0 ~ 3	
10	YPFG	12	0 ~ 15	
11	V1PSEL	3	0 ~ 3	
12	VEGSEL	3	0 ~ 3	
13	CC3N	0	0 ~ 1	
14	SELD2FH	1	0 ~ 1	
15	SELD1FL	1	0 ~ 1	
16	YHCOR	0	0 ~ 3	
17	HPLLFG	1	0 ~ 1	
18	PLLFS	1	0 ~ 1	
19	KILR	3	0 ~ 15	
20	HSSL	12	0 ~ 15	
21	VSSL	3	0 ~ 15	
22	BGPS	7	0 ~ 15	
23	BGPW	3	0 ~ 15	
<b>Group: 10 L3E07050</b>				
0	B_SUB_BRT	0/0	0 ~ 1023	PC/DVI, AV_102 _502 _902
1	G_SUB_BRT	0/0	0 ~ 1023	
2	R_SUB_BRT	0/0	0 ~ 1023	
3	G_SUB_GAIN	330/315/300/315	0 ~ 1023	PC/AV/DVI/HD_501 Tempolary set 500 at gammma date point 980 _901* B-Video Gain Adj. _101 * R-Video Gain Adj.
4	B_SUB_GAIN	330/315/300/315	0 ~ 1023	
5	R_SUB_GAIN	330/315/300/315	0 ~ 1023	
6	Standard G GAMMA SHIFT	400/390	0 ~ 1023	_503 PC,DVI std/AV Std Center 512 changes RGB data at same time *
7	Standard R GAMMA SHIFT	400/390	0 ~ 1023	
8	Standard B GAMMA SHIFT	400/390	0 ~ 1023	
9	Standard GAMMA 0	0/0 0/0		PC,DVI Standard / AV Standard Common in all systems
10	Standard GAMMA 1	214/204	0 ~ 1023	
11	Standard GAMMA 2	316/308	0 ~ 1023	
12	Standard GAMMA 3	414/411	0 ~ 1023	
13	Standard GAMMA 4	485/484	0 ~ 1023	
14	Standard GAMMA 5	539/542	0 ~ 1023	
15	Standard GAMMA 6	597/602	0 ~ 1023	
16	Standard GAMMA 7	637/641	0 ~ 1023	
17	Standard GAMMA 8	673/674	0 ~ 1023	

No.	Adjustment Item	Initial Value	Range	Input source / Description
18	Standard GAMMA 9	700/701	0 ~ 1023	
19	Standard GAMMA 10	728/730	0 ~ 1023	
20	Standard GAMMA 11	756/758	0 ~ 1023	
21	Standard GAMMA 12	785/786	0 ~ 1023	
22	Standard GAMMA 13	833/809	0 ~ 1023	
23	Standard GAMMA 14	912/830	0 ~ 1023	
24	Standard GAMMA 15	1023/882	0 ~ 1023	PC,DVI Real / AV Cinema (Difference value from the Standard)
25	Real/Cinema G GAMMA SHIFT	506/506	257 ~ 767	
26	Real/Cinema R GAMMA SHIFT	512/512	257 ~ 767	
27	Real/Cinema B GAMMA SHIFT	502/502	257 ~ 757	_103 _903
28	Real/Cinema GAMMA 0	512/512	257 ~ 767	PC,DVI Real / AV Cinema (Difference value from the Standard)
29	Real/Cinema GAMMA 1	522/527	257 ~ 767	
30	Real/Cinema GAMMA 2	518/521	257 ~ 767	
31	Real/Cinema GAMMA 3	515/519	257 ~ 767	
32	Real/Cinema GAMMA 4	514/516	257 ~ 767	
33	Real/Cinema GAMMA 5	512/512	257 ~ 767	
34	Real/Cinema GAMMA 6	510/510	257 ~ 767	
35	Real/Cinema GAMMA 7	508/508	257 ~ 767	
36	Real/Cinema GAMMA 8	505/505	257 ~ 767	
37	Real/Cinema GAMMA 9	503/503	257 ~ 767	
38	Real/Cinema GAMMA 10	501/501	257 ~ 767	
39	Real/Cinema GAMMA 11	499/499	257 ~ 767	
40	Real/Cinema GAMMA 12	496/496	257 ~ 767	
41	Real/Cinema GAMMA 13	492/492	257 ~ 767	
42	Real/Cinema GAMMA 14	488/488	257 ~ 767	
43	Real/Cinema GAMMA 15	512/512	257 ~ 767	
44	r_mid2_level	437	0 ~ 1023	_C9D
45	r_mid1_level	533	0 ~ 1023	_C9E
46	r_max_level	605	0 ~ 1023	_C9F
47	g_mid2_level	437	0 ~ 1023	_CA1
48	g_mid1_level	533	0 ~ 1023	_CA2
49	g_max_level	605	0 ~ 1023	_CA3
50	b_mid2_level	437	0 ~ 1023	_CA5
51	b_mid1_level	533	0 ~ 1023	_CA6
52	b_max_level	605	0 ~ 1023	_CA7
49	r_line_mura	1	0 ~ 255	_C48
49	g_line_mura	1	0 ~ 255	_C4D
49	b_line_mura	1	0 ~ 255	_C52
Group: 11 DAC				
0	G_VIDEO_CENTER	125	0 ~ 255	dac1-2 * G-Video Center Adj.
1	B_VIDEO_CENTER	125	0 ~ 255	dac1-1 * B-Video Center Adj.
2	R_VIDEO_CENTER	125	0 ~ 255	dac1-3 * R-Video Center Adj.
3	SIG1	40	0 ~ 255	dac2-1 * NRS-1 Adj.
4	SIG2	162	0 ~ 255	dac2-2 * NRS-2 Adj.
5	G_CLMP	0	0 ~ 255	dac4-2
6	B_CLMP	0	0 ~ 255	dac4-1
7	R_CLMP	0	0 ~ 255	dac4-3
8	REF_G	115	0 ~ 255	dac1-7 * G White-Black Level Adj.
9	REF_B	115	0 ~ 255	dac1-6 * B White-Black Level Adj.
10	REF_R	115	0 ~ 255	dac1-8 * R White-Black Level Adj.
11	AD_reference_bottom	34	0 ~ 255	dac3-5 * A/D Input Reference Adj. [Bottom]
12	AD_reference_top_G	109	0 ~ 255	dac3-7 * A/D Input Reference Adj. [Top]
13	AD_reference_top_B	109	0 ~ 255	dac3-8
14	AD_reference_top_R	109	0 ~ 255	dac3-6
15	AV_GCLP	105/105/105	0 ~ 255	dac3-2 video/1080i,1035i,720p/480p,525p * G-Video Pedestal Ad.
16	AV_BCLP	105/105/105	0 ~ 255	dac3-3 video/1080i,1035i,720p/480p,525p * B-Video Pedestal Ad.
17	AV_RCLP	105/105/105	0 ~ 255	dac3-1 video/1080i,1035i,720p/480p,525p * R-Video Pedestal Ad.
18	R_V_COM	70	0 ~ 255	dac2-6 * R-Common Center Adj.
19	G_V_COM	70	0 ~ 255	dac2-7 * G-Common Center Adj.
20	B_V_COM	70	0 ~ 255	dac2-8 * B-Common Center Adj.
Group: 12 MB40C348				
0	v_amp	1	0 or 1	adr0-2
1	dsel	1	0 or 1	adr0-1
2	ce	0	0 or 1	adr0-0
3	counter_w	64	0 ~ 4095	adr1,adr2(3-0)
4	adc_out	0	0 or 1	adr3-7

No.	Adjustment Item	Initial Value	Range	Input source / Description
5	hsync_pol	1	0 or 1	adr3-6
6	clk_delay	0	0 ~ 63	adr3(5-0)
7	dsync_delay	1	0 ~ 3	adr4(7-6)
8	adclk_b	1	0 or 1	adr4-5
9	adclk_a	1	0 or 1	adr4-4
10	dsync_b	1	0 or 1	adr4-3
11	dsync	1	0 or 1	adr4-2
12	clk_b	1	0 or 1	adr4-1
13	clk	1	0 or 1	adr4-0
14	divider	0	0 ~ 3	adr5(7-6)
15	vco_chg	0	0 or 1	adr5-5
16	current	0	0 or 3	adr5(4-3)
17	counter	1	0 or 1	adr5-2
18	out_cl	0	0 or 1	adr5-1
19	clk_chb	1	0 or 1	adr5-0
Group: 13 ICS_data				
0	ICS_R0_EnDLS	0	0 ~ 1	R0 NTSC & 480i / PAL & SECAM & 525i / 1035i&1080i60&1080i50 / 720P&480P&575P
1	ICS_R0_EnPLS	1	0 ~ 1	
2	ICS_R0_Func_Sel	0	0 ~ 1	
3	ICS_R0_Fbk_Sel	0	0 ~ 1	
4	ICS_R0_Fbk_Pol	0	0 ~ 1	
5	ICS_R0_Ref_Pol	0	0 ~ 1	
6	ICS_R0_PD_Pol	0	0 ~ 1	
7	ICS_R0_Pden	1	0 ~ 1	
8	ICS_R1_PSD	2/2/0/0 0/0/2/0	0 ~3	R1
9	ICS_R1_PFD	7/7/5/5 5/5/6/5	0 ~7	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
10	ICS_R3_FBD	3194	0 ~8191	R3_R2 NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
11	ICS_R4_Fil_Sel	0	0 ~ 1	R4
12	ICS_R4_DPA_OS	0	0 ~ 63	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
13	ICS_R5_Mask_Rev	0	0 ~ 63	R5
14	ICS_R5_DPA_Res	0	0 ~ 3	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
15	ICS_R6_Out_Scl	0	0 ~3	R6
16	ICS_R6_Ck2_Inv	0	0 ~ 1	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
17	ICS_R6_OE_F	1	0 ~ 1	
18	ICS_R6_OE_T2	0	0 ~ 1	
19	ICS_R6_OE_P2	0	0 ~ 1	
20	ICS_R6_OE_Tck	0	0 ~ 1	
21	ICS_R6_OE_Pck	0	0 ~ 1	
22	ICS_R7_In_Sel	0	0 ~ 1	R7
23	ICS_R7_Osc_Div	0	0 ~ 127	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
24	ICS_R8_PLL	0	0 ~ 15	R8
25	ICS_R8_DPA	10	0 ~ 15	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 & 1080i50 / 720P & 480P & 575P
Group: 14 PC Real / AV Cinema				
0	PC Real Contrast	32	0 ~ 63	
1	PC Real Brightness	32	0 ~ 63	
2	PC Real Red	32	0 ~ 63	
3	PC Real Green	32	0 ~ 63	
4	PC Real Blue	32	0 ~ 63	
5	PC Real Gamma	8	0 ~ 15	
6	AV Cinema Contrast	32	0 ~ 63	
7	AV Cinema Brightness	32	0 ~ 63	
8	AV Cinema Color	32	0 ~ 63	
9	AV Cinema Tint	32	0 ~ 63	
10	AV Cinema Red	32	0 ~ 63	
11	AV Cinema Green	32	0 ~ 63	
12	AV Cinema Blue	32	0 ~ 63	
13	AV Cinema Sharpness	15	0 ~ 31	
14	AV Cinema Gamma	8	0 ~ 15	
15	AV Cinema N.R.	0	0 or 1	
16	AV Cinema PROGRESSIVE	1	0 or 1	
Group: 15 IP Conversion				
0	IMAGE_IN_FUNC_POL	0/0/0/0/0/0/0/0	0 or 1	000-b4 (reg 0) NTSC/PAL/480p/575p/1035i/1080i/720p/480i/575i
1	IMAGE_IN_HD_SEL	1/1/1/1/1/1/1/1	0 or 1	000-b3
2	IMAGE_IN_HD_POL	0/0/0/0/0/0/0/0	0 or 1	000-b2

No.	Adjustment Item	Initial Value	Range	Input source / Description	
3	IMAGE_IN_VD_POL	0/0/0/0/0/0/0/0	0 or 1	000-b1	Read only
4	IMAGE_IN_LPF_SEL	0/0/0/0/0/0/0/0	0 or 1	000-b0	
5	IMAGE_OUT_CLK_POL	0/0/0/0/0/0/0/0	0 or 1	001-b5	
6	IMAGE_OUT_HD_POL	0/0/0/0/0/0/0/0	0 or 1	001-b4	
7	IMAGE_OUT_VD_POL	0/0/0/0/0/0/0/0	0 or 1	001-b3	
8	IMAGE_OUT_CS_SEL	0/0/0/0/0/0/0/0	0 or 1	001-b2	
9	IMAGE_OUT_DEMUX	1/1/1/1/1/1/1/1	0 or 1	001-b1	
10	IMAGE_OUT_THROUGH	0/0/1/1/0/0/1/0/0	0 or 1	001-b0	
11	IMAGE_IN_TOTAL_H	Same as G510~G517	0 ~ 2047	002/003	
12	IMAGE_IN_START_H	72/108/76/143 88/88/116/76/76	0 ~ 2047	004/005	Read only
13	IMAGE_IN_SIZE_H	13/13/13/11/12/12/11/11/11	0 ~ 15	006	
14	IMAGE_IN_START_V,	9/15/31/36/ 16/16/16/9/15	0 ~ 1023	007/008	
15	IMAGE_IN_SIZE_V,	249/293/488/ 587/545/545/ 725/249/293	0 ~ 1023	009/010	
16	CLAMP_H,	08/00/0/0/ 0/0/5/03/14	0 ~ 2047	011/012	
17	CLAMP_L,	45/36/37/37/ 37/37/64/40/53	0 ~ 2047	013/014	
18	IMAGE_OUT_DELAY_H,	260/312/312/ 809/331/331/ 272/312/312	0 ~ 2047	015/016 Read only	
19	SYNC_OUT_DELAY_H,	220/220/194/ 703/319/331/ 319/220/220	0 ~ 2047	017/018 Read only	
20	SYNC_OUT_DELAY_V,	0/0/1/1/0/0/1/0/0	0 ~ 2047	019/020	Read only
21	IMAGE_OUT_START_H, 021/022	0	0 Fixed		
22	IMAGE_OUT_END_H, 023/024	2047	2047 Fixed		
23	IMAGE_OUT_START_V,	35/62/72/86/ 41/41/50/35/62	0 ~ 2047	025/026	
24	IMAGE_OUT_END_V,	517/618/1038/ 1250/1119/1110/ 1490/517/618	0 ~ 2047	027/028	
25	G_Y_IN_OS,	0	0 ~ 255	029	
26	B_CB_IN_OS,	0	0 ~ 255	030	
27	R_CR_IN_OS,	0	0 ~ 255	031	
28	G2Y,	150/183	0 ~ 1023	032/033	(reg 2) NTSC,PAL,480p,575p / 1035i,1080i,720p
29	B2Y,	29/19	0 ~ 1023	034/035	
30	R2Y,	77/54	0 ~ 1023	036/037	
31	G2CB,	939/925	0 ~ 1023	038/039	
32	B2CB,	128/128	0 ~ 1023	040/041	
33	R2CB,	981/995	0 ~ 1023	042/043	
34	G2CR,	981/995	0 ~ 1023	044/045	
35	B2CR,	1003/1012	0 ~ 1023	046/047	
36	R2CR,	128/128	0 ~ 1023	048/049	
37	HUE_M,	37/35	0 ~ 255	050	(reg 3) DNR-OFF / DNR-ON
38	GAIN_M,	0/0	0 ~ 127	051	
39	DG_M_R,	0/0	0 ~ 63	052	
40	HUE_R,	77/73	0 ~ 255	053	
41	GAIN_R,	0/0	0 ~ 127	054	
42	DG_R_Y,	0/0	0 ~ 63	055	
43	HUE_Y,	121/124	0 ~ 255	056	
44	GAIN_Y,	0/0	0 ~ 127	057	
45	DG_Y_G,	0/0	0 ~ 63	058	
46	HUE_G,	165/163	0 ~ 255	059	(reg 3) DNR-OFF / DNR-ON
47	GAIN_G,	0/0	0 ~ 127	060	
48	DG_G_C,	0/0	0 ~ 63	061	
49	HUE_C,	205/201	0 ~ 255	062	
50	GAIN_C,	0/0	0 ~ 127	063	
51	DG_C_B,	0/0	0 ~ 63	064	
52	HUE_B,	249/	0 ~ 255	065	
53	GAIN_B,	0/0	0 ~ 127	066	
54	DG_B_M,	0/0	0 ~ 63	067	
55	DNR_Y_NOISE_TH,	8/8	0 ~ 127	068	(reg 3) DNR-OFF / DNR-ON
56	DNR_Y_SENSE,	2/6	0 ~ 15	069	
57	DNR_Y_MOTION_TH,	0/0	0 ~ 127	070	

No.	Adjustment Item	Initial Value	Range	Input source / Description
58	DNR_Y_MOTION_SLOPE,	4/4	0 ~ 7	071
59	DNR_Y_MOTION_F2_F0,	0/0	0 ~ 3	072
60	DNR_Y_MOTION_F4_F2,	3/3	0 ~ 3	073
61	DNR_C_NOISE_TH,	8/8	0 ~ 127	074
62	DNR_C_SENSE,	2/6	0 ~ 15	075
63	DNR_C_MOTION_TH,	0/0	0 ~ 127	076
64	DNR_C_MOTION_SLOPE,	4/4	0 ~ 7	077
65	DNR_C_MOTION_F2_F0,	0/0	0 ~ 3	078
66	DNR_C_MOTION_F4_F2,	3/3	0 ~ 3	079
67	IP_DEBUG,	0/0/0	0 ~ 7	080 (reg 4) IP-ON=NTSC,PAL,1035i,1080i / 720p,480p,575p / IP-OFF
68	IP_CTL_Y,	0/1/1	0 or 1	081-1
69	IP_CTL_C,	1/1/1	0 or 1	081-0
70	IP_DIR,	10/0/0	0 ~ 15	082 (reg 5) IP-ON=NTSC,PAL / IP-ON=720p,480p,575p,1035i,1080i / IP-OFF
71	IP_VAR_GAI,	8/0/0	0 ~ 15	083
72	IP_BPF_CORR,	4/0/0	0 ~ 255	084
73	IP_BPF_GAIN,	32/0/0	0 ~ 63	085
74	IP_REL_H_GAIN,	63/0/0	0 ~ 63	086
75	IP_REL_V_GAIN,	63/0/0	0 ~ 63	087
76	MOTION_LPF_SEL,	7/7/7/7	0 ~ 7	088 (reg 6) DNR-ON=NTSC,PAL/DNR-OFF=NTSC,PAL/1035i,1080i/720p,480p,575p
77	MOTION_TH_MIN,	16/16/16/16	0 ~ 255	089
78	MOTION_TH_MAX,	24/24/24/24	0 ~ 255	090
79	MOTION_TH_DL,	8/12/8/8	0 ~ 255	091
80	MOTION_WEIGHT_0,	9/9/9/9	0 ~ 15	092
81	MOTION_WEIGHT_1,	8/8/8/8	0 ~ 15	093
82	MOTION_WEIGHT_2,	7/7/7/7	0 ~ 15	094
83	MOTION_WEIGHT_3,	6/6/6/6	0 ~ 15	095
84	MOTION_WEIGHT_4,	5/5/5/5	0 ~ 15	096
85	MOTION_WEIGHT_5,	4/4/4/4	0 ~ 15	097
86	MOTION_WEIGHT_6,	3/3/3/3	0 ~ 15	098
87	MOTION_WEIGHT_7,	2/2/2/2	0 ~ 15	099
88	MOTION_WEIGHT_8,	1/1/1/1	0 ~ 15	100
89	MOTION_SUM_0,	20/20/20/20	0 ~ 1023	101
90	MOTION_SUM_1,	32/32/32/32	0 ~ 1023	103
91	MOTION_SUM_2,	86/86/86/86	0 ~ 1023	105
92	MOTION_SUM_3,	110/110/110/110	0 ~ 1023	107
93	PEAK_V_LPF_SEL,	1	0 or 1	109 (reg 7) fix
94	PEAK_V_CORR,	4	0 ~ 255	110
95	PEAK_V_GAIN,	8	0 ~ 63	111
96	PEAK_V_GAIN_TH,	0	0 ~ 255	112
97	PEAK_V_GAIN_SLOPE,	0	0 ~ 7	113
98	PEAK_V_MAX,	255	0 ~ 255	114
99	TI_Y_TH_MIN,	0	0 ~ 255	115
100	TI_Y_TH_MAX,	0	0 ~ 255	116
101	TI_Y_CORR,	0	0 ~ 255	117
102	TI_Y_GAIN,	0	0 ~ 63	118
103	TI_Y_GAIN_TH,	0	0 ~ 255	119
104	TI_Y_GAIN_SLOPE,	0	0 ~ 7	120
105	TI_Y_GAIN_SEL,	0	0 ~ 7	121
106	TI_C_TH_MIN,	0	0 ~ 255	122
107	TI_C_TH_MAX,	0	0 ~ 255	123
108	TI_C_CORR,	0	0 ~ 255	124
109	TI_C_GAIN,	0	0 ~ 63	125
110	TI_C_GAIN_TH,	0	0 ~ 255	126
111	TI_C_GAIN_SLOPE,	0	0 ~ 7	127
112	TI_C_GAIN_SEL,	0	0 ~ 7	128
113	PEAK_H_BPF_SEL,	2/0	0 ~ 3	129 (reg 8) NTSC,PAL / 1035i,1080i,720p
114	PEAK_H_CORR,	4/4	0 ~ 255	130
115	PEAK_H_GAIN,	6/0	0 ~ 63	131
116	PEAK_H_GAIN_TH,	0/0	0 ~ 255	132
117	PEAK_H_GAIN_SLOPE,	3/0	0 ~ 7	133
118	PEAK_H_GAIN_SEL,	1/0	0 ~ 3	134
119	PEAK_H_MAX,	255/255	0 ~ 255	135
120	Y2G,	256/256	0 ~ 1023	136/137 (reg 9) NTSC,PAL,480p,575p / 1035i,1080i,720p
121	CB2G,	960/989	0 ~ 1023	138/139
122	CR2G,	830/897	0 ~ 1023	140/141
123	Y2B,	256/256	0 ~ 1023	142/143
124	CB2B,	454/475	0 ~ 1023	144/145
125	CR2B,	0/0	0 ~ 1023	146/147

No.	Adjustment Item	Initial Value	Range	Input source / Description
126	Y2R,	256/256	0 ~ 1023	148/149
127	CB2R,	0/0	0 ~ 1023	150/151
128	CR2R,	359/403	0 ~ 1023	152/153
129	G_Y_OUT_OS,	0	0 ~ 255	154 (reg A) fix
130	G_Y_OUT_MIN,	0	0 ~ 255	155
131	G_Y_OUT_DC,	16	0 ~ 255	156
132	G_Y_OUT_MAX,	255	0 ~ 255	157
133	B_CB_OUT_OS,	0	0 ~ 255	158
134	B_CB_OUT_MIN,	0	0 ~ 255	159
135	B_CB_OUT_DC,	1	0 ~ 255	160
136	B_CB_OUT_MAX,	255	0 ~ 255	161
137	R_CR_OUT_OS,	0	0 ~ 255	162
138	R_CR_OUT_MIN,	0	0 ~ 255	163
139	R_CR_OUT_DC,	16	0 ~ 255	164
140	R_CR_OUT_MAX,	255	0 ~ 255	165
141	CINEMA_START_H,	0/0/0	0 ~ 255	166 (reg B) IP-ON=NTSC / IP-ON=etc / IP-OFF
142	CINEMA_SIZE_H,	160/0/0	0 ~ 255	167
143	CINEMA_START_V,	1/0/0	0 ~ 255	168
144	CINEMA_SIZE_V,	60/0/0	0 ~ 255	169
145	CINEMA_MOTION_TH,	16/0/0	0 ~ 255	170 maximum limit
146	CINEMA_DET_TH,	384/0/0	0 ~ 65535	171:1024 maximum limit
147	CINEMA_DET_FIELD,	7/0/0	0 ~ 7	173
148	CINEMA_CTL_SWAP,	20/0/0	0 ~ 31	174
149	CINEMA_CTL_Y,	0/1/1	0 or 1	175-1
150	CINEMA_CTL_C,	1/1/1	0 or 1	175-0
151	EXT_CINEMA_DET,	0/0/0	0 or 1	176-2
152	EXT_CINEMA_MODE,	0/0/0	0 or 1	176-1
153	EXT_CINEMA_SWAP,	0/0/0	0 or 1	176-0
<b>Group: 30 SAM3</b>				
0	SAM3_AREA_DISP_ON_ud	0	0 ~ 1	Picture image correction area display on/off 1: on
1	SAM3_SA_ON_ud	0	0 ~ 1	Y signal conversion switch on/off 1:ON
2	SAM3_MONI_SEL_ON_ud	0	0 ~ 1	
3	SAM3_SHP_EN_SET_ud	194	0 ~ 4095	Aperture comp set
4	SAM3_SHP_EN_RST_ud	1538	0 ~ 4095	Aperture comp. reset
5	SAM3_AREA_ON_PIC_LEVEL	31	0 ~ 255	ScreenSize auto judgement level set
6	SAM3_AREA_ON_PIC_MONITOR	0	0 ~ 1	ScreenSize auto judgement RS-232C monitor switch 1:ON
7	SAM3_COLOM_POINT_MONITOR	0	0 ~ 1	ColorManagement RS-232C monitor switch 1:ON
<b>Group: 31 SAM3 Enhancer &lt;&lt;Uses external flash memory&gt;&gt;</b>				
0	SAM3_ENH_PC_ONOFF	0	0 ~ 1	Flag for enhancer PC Disable=0, Enable=1
1	SAM3_ENH_AV_ONOFF	1	0 ~ 1	Flag for enhancer AV Disable=0, Enable=1
2	SAM3_ENH_CHANGE_L_ud	17	0 ~ 100	identify level of frequency change
3	SAM3_ENH_CORE_L_ud	63	0 ~ 127	Input luminance change level for noise canceller
4	SAM3_ENH_DNR_Y_ud	64	0 ~ 1023	Input luminance effective level for noise canceller
5	SAM3_AB_ON_ud	3	0 ~ 3	Data period for Apperture compensation
6	SAM3_EGE_ud	0	0 ~ 3	Data selection for frequency characteristics
7	SAM3_ENH_HSET_PC_X_ud	83	0 ~ 255	Start position of area H, PC SCREEN-Normal / True(XGA)
8	SAM3_ENH_HRESET_PC_X_ud	170	0 ~ 255	End position of area H, PC SCREEN-Normal / True(XGA)
9	SAM3_ENH_VSET_PC_X_ud	1	0 ~ 255	Start position of area V, PC SCREEN-Normal / True(XGA)
10	SAM3_ENH_VRESET_PC_X_ud	98	0 ~ 255	End position of area V, PC SCREEN-Normal / True(XGA)
11	SAM3_ENH_HSET_PC_F_ud	41	0 ~ 255	Start position of area H, PC SCREEN-Full
12	SAM3_ENH_HRESET_PC_F_ud	191	0 ~ 255	End position of area H, PC SCREEN-Full
13	SAM3_ENH_VSET_PC_F_ud	1	0 ~ 255	Start position of area V, PC SCREEN-Full
14	SAM3_ENH_VRESET_PC_F_ud	98	0 ~ 255	End position of area V, PC SCREEN-Full
15	SAM3_ENH_HSET_PC_V_ud	131	0 ~ 255	Start position of area H, PC SCREEN-True(VGA)
16	SAM3_ENH_HRESET_PC_V_ud	146	0 ~ 255	End position of area H, PC SCREEN-True(VGA)
17	SAM3_ENH_VSET_PC_V_ud	19	0 ~ 255	Start position of area V, PC SCREEN-True(VGA)
18	SAM3_ENH_VRESET_PC_V_ud	80	0 ~ 255	End position of area V, PC SCREEN-True(VGA)
19	SAM3_ENH_HSET_AV_F_ud	41	0 ~ 255	Start position of area H, AV SCREEN-Full,WideZoom
20	SAM3_ENH_HRESET_AV_F_ud	191	0 ~ 255	End position of area H, AV SCREEN-Full,WideZoom
21	SAM3_ENH_VSET_AV_F_ud	13	0 ~ 255	Start position of area V, AV SCREEN-Full,WideZoom
22	SAM3_ENH_VRESET_AV_F_ud	85	0 ~ 255	End position of area V, AV SCREEN-Full,WideZoom
23	SAM3_ENH_HSET_AV_Z_ud	41	0 ~ 255	Start position of area H, AV SCREEN-Zoom
24	SAM3_ENH_HRESET_AV_Z_ud	191	0 ~ 255	End position of area H, AV SCREEN-Zoom
25	SAM3_ENH_VSET_AV_Z_ud	1	0 ~ 255	Start position of area V, AV SCREEN-Zoom
26	SAM3_ENH_VRESET_AV_Z_ud	98	0 ~ 255	End position of area V, AV SCREEN-Zoom
27	SAM3_ENH_HSET_AV_N_ud	83	0 ~ 255	Start position of area H,AV SCREEN-Normal

No.	Adjustment Item	Initial Value	Range	Input source / Description
28	SAM3_ENH_HRESET_AV_N_ud	170	0 ~ 255	End position of area H, AV SCREEN-Normal
29	SAM3_ENH_VSET_AV_N_ud	13	0 ~ 255	Start position of area V, AV SCREEN-Normal
30	SAM3_ENH_VRESET_AV_N_ud	85	0 ~ 255	End position of area V, AV SCREEN-Normal
31	SAM3_ENH_PC_LEVEL0	0	0 ~ 31	Reference level for Enhancer PC
32	SAM3_ENH_PC_LEVEL1	21	0 ~ 31	Judgement level for Enhancer PC value1
33	SAM3_ENH_PC_LEVEL2	21	0 ~ 31	Judgement level for Enhancer PC value2
34	SAM3_ENH_PC_AREA_HS	0	0 ~ 3	Horizontal start for Enhancer PC
35	SAM3_ENH_PC_AREA_VS	3	0 ~ 7	Vertical start for Enhancer PC
36	SAM3_ENH_PC_AREA_HE	3	0 ~ 3	Horizontal end for Enhancer PC
37	SAM3_ENH_PC_AREA_VE	5	0 ~ 7	Vertical end for Enhancer PC
38	SAM3_ENH_PC_AREA1	50	0 ~ 655	Total judgement for Enhancer PC Value: D1
39	SAM3_ENH_PC_AREA2	50	0 ~ 655	Total judgement for Enhancer PC value:D2
40	SAM3_ENH_AV_LEVEL0	23	0 ~ 31	Reference level for Enhancer AV
41	SAM3_ENH_AV_LEVEL1	23	0 ~ 31	Level:L1 for Enhancer AV
42	SAM3_ENH_AV_LEVEL2	22	0 ~ 31	Level:L2 for Enhancer AV
43	SAM3_ENH_AV_AREA_HS	1	0 ~ 3	Horizontal start for Enhancer AV
44	SAM3_ENH_AV_AREA_VS	0	0 ~ 7	Vertical start for Enhancer AV
45	SAM3_ENH_AV_AREA_HE	2	0 ~ 3	Horizontal end for Enhancer AV
46	SAM3_ENH_AV_AREA_VE	7	0 ~ 7	Vertical end for Enhancer AV
47	SAM3_ENH_AV_AREA1	0	0 ~ 655	Total judgement for Enhancer AV
100 ~107	SAM3_ENH_GAIN_0_A ~ SAM3_ENH_GAIN_0_H	0, 0, 0, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 0:GAIN_AA~GAIN_AH
108 ~115	SAM3_ENH_GAIN_1_A ~ SAM3_ENH_GAIN_1_H	0, 1, 0, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 1:GAIN_AA~GAIN_AH
116 ~123	SAM3_ENH_GAIN_2_A ~ SAM3_ENH_GAIN_2_H	0, 2, 0, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 2:GAIN_AA~GAIN_AH
124 ~131	SAM3_ENH_GAIN_3_A ~ SAM3_ENH_GAIN_3_H	0, 3, 1, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 3:GAIN_AA~GAIN_AH
132 ~139	SAM3_ENH_GAIN_4_A ~ SAM3_ENH_GAIN_4_H	0, 4, 2, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 4:GAIN_AA~GAIN_AH
140 ~147	SAM3_ENH_GAIN_5_A ~ SAM3_ENH_GAIN_5_H	0, 5, 3, 1 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 5:GAIN_AA~GAIN_AH
148 ~155	SAM3_ENH_GAIN_6_A ~ SAM3_ENH_GAIN_6_H	0, 6, 4, 2 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 6:GAIN_AA~GAIN_AH
156 ~163	SAM3_ENH_GAIN_7_A ~ SAM3_ENH_GAIN_7_H	0, 7, 5, 3 1, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 7:GAIN_AA~GAIN_AH
164 ~171	SAM3_ENH_GAIN_8_A ~ SAM3_ENH_GAIN_8_H	0, 8, 6, 4 2, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 8:GAIN_AA~GAIN_AH
172 ~179	SAM3_ENH_GAIN_9_A ~ SAM3_ENH_GAIN_9_H	0, 9, 7, 5 3, 1, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 9:GAIN_AA~GAIN_AH
180 ~187	SAM3_ENH_GAIN_10_A ~ SAM3_ENH_GAIN_10_H	0,10, 8, 6 4, 2, 1, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 10:GAIN_AA~GAIN_AH
188 ~195	SAM3_ENH_GAIN_11_A ~ SAM3_ENH_GAIN_11_H	0,11, 9, 7 5, 3, 1, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 11:GAIN_AA~GAIN_AH
196 ~203	SAM3_ENH_GAIN_12_A ~ SAM3_ENH_GAIN_12_H	0,12,10, 8 6, 4, 2, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 12:GAIN_AA~GAIN_AH
204 ~211	SAM3_ENH_GAIN_13_A ~ SAM3_ENH_GAIN_13_H	0,13,11, 9 7, 5, 3, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 13:GAIN_AA~GAIN_AH
212 ~219	SAM3_ENH_GAIN_14_A ~ SAM3_ENH_GAIN_14_H	0,14,12,10 8, 6, 4, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 14:GAIN_AA~GAIN_AH
220 ~227	SAM3_ENH_GAIN_15_A ~ SAM3_ENH_GAIN_15_H	0,15,13,11 9, 7, 5, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 15:GAIN_AA~GAIN_AH
228 ~235	SAM3_ENH_GAIN_16_A ~ SAM3_ENH_GAIN_16_H	0,16,14,12 10, 8, 6, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 16:GAIN_AA~GAIN_AH
236 ~243	SAM3_ENH_GAIN_17_A ~ SAM3_ENH_GAIN_17_H	0,17,15,13 11, 9, 7, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 17:GAIN_AA~GAIN_AH
244 ~251	SAM3_ENH_GAIN_18_A ~ SAM3_ENH_GAIN_18_H	0,18,16,14 12,10, 8, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 18:GAIN_AA~GAIN_AH
252 ~259	SAM3_ENH_GAIN_19_A ~ SAM3_ENH_GAIN_19_H	0,19,17,15 13,11, 9, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 19:GAIN_AA~GAIN_AH
260 ~267	SAM3_ENH_GAIN_20_A ~ SAM3_ENH_GAIN_20_H	31,31,31,31 31,31,31,31	0 ~ 31	Enhancer: Gain for noise canceller: Level 20:GAIN_AA~GAIN_AH
268 ~275	SAM3_ENH_GAIN_21_A ~ SAM3_ENH_GAIN_21_H	31,31,22,12 6, 4, 2, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 21:GAIN_AA~GAIN_AH
276 ~283	SAM3_ENH_GAIN_22_A ~ SAM3_ENH_GAIN_22_H	0, 12, 0, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 22:GAIN_AA~GAIN_AH
284 ~291	SAM3_ENH_GAIN_23_A ~ SAM3_ENH_GAIN_23_H	0, 6, 0, 0 0, 0, 0, 0	0 ~ 31	Enhancer: Gain for noise canceller: Level 23:GAIN_AA~GAIN_AH



No.	Adjustment Item	Initial Value	Range	Input source / Description
292 ~355	SAM3_ENH_GAIN_24_A ~ SAM3_ENH_GAIN_31_H	0 ~ 0	0 ~ 31 0 ~ 31	Enhancer: Gain for noise canceller: Level 24~31:GAIN_AA~GAIN_AH
<b>Group: 32 SAM3 Image Compensation &lt;&lt;Uses external flash memory&gt;&gt;</b>				
0	SAM3_CONT_ONOFF	1	0 ~ 2	Flag for Image Correction Disable=0, Enable=1, Enable(Re-judgement)=2
1	SAM3_CONT_L1_MD1_L	8	0 ~ 31	Image Correction:L1: at MODE1
2	SAM3_CONT_L1_MD2_L	8	0 ~ 31	Image Correction:L1: at MODE2
3	SAM3_CONT_L1_MD3_L	8	0 ~ 31	Image Correction:L1: at MODE3
4	SAM3_CONT_L2_MD1_L	12	0 ~ 31	Image Correction:L2: at MODE1
5	SAM3_CONT_L2_MD2_L	16	0 ~ 31	Image Correction:L2: at MODE2
6	SAM3_CONT_L2_MD3_L	20	0 ~ 31	Image Correction:L2: at MODE3
7	SAM3_CONT_OFFSET	10	0 ~ 511	Contrast judgement (max. value-Éø)
8	SAM3_CONT_APL_LEVEL	250	0 ~ 511	
9	SAM3_CONT_APL_M_LEVEL	100	0 ~ 511	
10	SAM3_CONT_APL_SPEED	2	1 ~ 64	
11	SAM3_CONT_CHANGE_LEVEL1	15	0 ~ 127	
12	SAM3_CONT_CHANGE_LEVEL2	30	0 ~ 127	(ModeChangeLevel)
13	SAM3_CONT_HST_PC_X_ud	366	0 ~ 4095	Start position of area H, PC SCREEN-Normal / True(XGA)
14	SAM3_CONT_VST_PC_X_ud	8	0 ~ 4095	Start position of area V, PC SCREEN-Normal / True(XGA)
15	SAM3_CONT_HBLK_PC_X_ud	31	0 ~ 63	Dots of area H, PC SCREEN-Normal / True(XGA)
16	SAM3_CONT_VBLK_PC_X_ud	23	0 ~ 63	Lines of area V, PC SCREEN-Normal / True(XGA)
17	SAM3_CONT_HST_PC_F_ud	208	0 ~ 4095	Start position of area H, PC SCREEN-Full
18	SAM3_CONT_VST_PC_F_ud	8	0 ~ 4095	Start position of area V, PC SCREEN-Full
19	SAM3_CONT_HBLK_PC_F_ud	41	0 ~ 63	Dots of area H, PC SCREEN-Full
20	SAM3_CONT_VBLK_PC_F_ud	23	0 ~ 63	Lines of area V, PC SCREEN-Full
21	SAM3_CONT_HST_PC_V_ud	557	0 ~ 4095	Start position of area H, PC SCREEN-True(VGA)
22	SAM3_CONT_VST_PC_V_ud	152	0 ~ 4095	Start position of area V, PC SCREEN-True(VGA)
23	SAM3_CONT_HBLK_PC_V_ud	19	0 ~ 63	Dots of area H, PC SCREEN-True(VGA)
24	SAM3_CONT_VBLK_PC_V_ud	14	0 ~ 63	Lines of area V, PC SCREEN-True(VGA)
25	SAM3_CONT_HST_AV_F_ud	208	0 ~ 4095	Start position of area H, AV SCREEN-Full
26	SAM3_CONT_VST_AV_F_ud	8	0 ~ 4095	Start position of area V, AV SCREEN-Full
27	SAM3_CONT_HBLK_AV_F_ud	41	0 ~ 63	Dots of area H, AV SCREEN-Full
28	SAM3_CONT_VBLK_AV_F_ud	23	0 ~ 63	Lines of area V, AV SCREEN-Full
29	SAM3_CONT_VST_AV_F_V_ud	103	0 ~ 4095	Start position of area V, AV SCREEN-Full: Vista size
30	SAM3_CONT_VBLK_AV_F_V_ud	17	0 ~ 63	Lines of area V, AV SCREEN-Full: Vista size
31	SAM3_CONT_VST_AV_F_V_ud	167	0 ~ 4095	Start position of area V, AV SCREEN-Full: Cienesco size
32	SAM3_CONT_VBLK_AV_F_V_ud	13	0 ~ 63	Lines of area V, AV SCREEN-Full: Cienesco size
33	SAM3_CONT_HST_AV_Z_ud	208	0 ~ 4095	Start position of area H, AV SCREEN-Zoom
34	SAM3_CONT_VST_AV_Z_ud	8	0 ~ 4095	Start position of area V, AV SCREEN-Zoom
35	SAM3_CONT_HBLK_AV_Z_ud	41	0 ~ 63	Dots of area H, AV SCREEN-Zoom
36	SAM3_CONT_VBLK_AV_Z_ud	23	0 ~ 63	Lines of area V, AV SCREEN-Zoom
37	SAM3_CONT_VST_AV_Z_C_ud	92	0 ~ 4095	Start position of area V, AV SCREEN-Zoom: Cienesco size
38	SAM3_CONT_VBLK_AV_Z_C_ud	18	0 ~ 63	Lines of area V, AV SCREEN-Zoom: Cienesco size
39	SAM3_CONT_HST_AV_N_ud	366	0 ~ 4095	Start position of area H, AV SCREEN-Normal
40	SAM3_CONT_VST_AV_N_ud	8	0 ~ 4095	Start position of area V, AV SCREEN-Normal
41	SAM3_CONT_HBLK_AV_N_ud	31	0 ~ 63	Dots of area H, AV SCREEN-Normal
42	SAM3_CONT_VBLK_AV_N_ud	23	0 ~ 63	Lines of area V, AV SCREEN-Normal
43	SAM3_CONT_VST_AV_N_V_ud	103	0 ~ 4095	Start position of area V, AV SCREEN-Normal: Vista size
44	SAM3_CONT_VBLK_AV_N_V_ud	17	0 ~ 63	Lines of area V, AV SCREEN-Normal: Vista size
45	SAM3_CONT_VST_AV_N_C_ud	167	0 ~ 4095	Start position of area V, AV SCREEN-Normal: Cienesco size
46	SAM3_CONT_VBLK_AV_N_C_ud	13	0 ~ 63	Lines of area V, AV SCREEN-Normal: Cienesco size
47	SAM3_LEVELUP_MODE_EQ_CNT	2	0 ~ 16	
100 ~107	SAM3_CONT_MD1_0_H ~ SAM3_CONT_MD1_0_A	32,32,32,32 32,32,32,32	0 ~ 127	Image Correction MODE1:Level0:KEI_H~KEI_A Standard value32
108 ~115	SAM3_CONT_MD1_0_H + 8 ~ SAM3_CONT_MD1_0_A + 8	32,32,32,33 32,32,32,31	0 ~ 127	Image Correction MODE1:Level1:KEI_H~KEI_A Standard value32
116 ~123	SAM3_CONT_MD1_0_H + 16 ~ SAM3_CONT_MD1_0_A + 16	32,32,33,33 32,32,31,31	0 ~ 127	Image Correction MODE1:Level2:KEI_H~KEI_A Standard value32
124 ~131	SAM3_CONT_MD1_0_H + 24 ~ SAM3_CONT_MD1_0_A + 24	32,32,33,34 32,31,31,31	0 ~ 127	Image Correction MODE1:Level3:KEI_H~KEI_A Standard value32
132 ~139	SAM3_CONT_MD1_0_H + 32 ~ SAM3_CONT_MD1_0_A + 32	32,32,34,34 31,31,31,31	0 ~ 127	Image Correction MODE1:Level4:KEI_H~KEI_A Standard value32
140 ~147	SAM3_CONT_MD1_0_H + 40 ~ SAM3_CONT_MD1_0_A + 40	32,31,34,35 31,31,31,31	0 ~ 127	Image Correction MODE1:Level5:KEI_H~KEI_A Standard value32
148 ~155	SAM3_CONT_MD1_0_H + 48 ~ SAM3_CONT_MD1_0_A + 48	31,31,35,35 31,31,31,31	0 ~ 127	Image Correction MODE1:Level6:KEI_H~KEI_A Standard value32
156 ~163	SAM3_CONT_MD1_0_H + 56 ~ SAM3_CONT_MD1_0_A + 56	31,31,35,36 31,31,31,30	0 ~ 127	Image Correction MODE1:Level7:KEI_H~KEI_A Standard value32



No.	Adjustment Item	Initial Value	Range	Input source / Description
156 ~163	SAM3_CONT_MD1_0_H + 64 ~ SAM3_CONT_MD1_0_A + 64	31,31,36,36, 31,31,30,30	0 ~ 127	Image Correction MODE1:Level8:KEI_H~KEI_A Standard value32
156 ~355	SAM3_CONT_MD1_0_H + 72 ~ SAM3_CONT_MD1_0_A + 248		0 ~ 127	Image Correction MODE1:Level9~31:KEI_H~KEI_A Not used
356 ~363	SAM3_CONT_MD2_0_H ~ SAM3_CONT_MD2_0_A	32,32,32,32, 32,32,32,32	0 ~ 127	Image Correction MODE2:Level0:KEI_H~KEI_A Standard value32
364 ~371	SAM3_CONT_MD2_0_H + 8 ~ SAM3_CONT_MD2_0_A + 8	31,32,32,32, 33,32,32,32	0 ~ 127	Image Correction MODE2:Level1:KEI_H~KEI_A Standard value32
372 ~379	SAM3_CONT_MD2_0_H + 16 ~ SAM3_CONT_MD2_0_A + 16	31,31,32,32, 33,33,32,32	0 ~ 127	Image Correction MODE2:Level2:KEI_H~KEI_A Standard value32
380 ~387	SAM3_CONT_MD2_0_H + 24 ~ SAM3_CONT_MD2_0_A + 24	31,31,31,32, 34,33,32,32	0 ~ 127	Image Correction MODE2:Level3:KEI_H~KEI_A Standard value32
388 ~395	SAM3_CONT_MD2_0_H + 32 ~ SAM3_CONT_MD2_0_A + 32	31,31,31,31, 34,34,32,32	0 ~ 127	Image Correction MODE2:Level4:KEI_H~KEI_A Standard value32
396 ~403	SAM3_CONT_MD2_0_H + 40 ~ SAM3_CONT_MD2_0_A + 40	31,31,31,31, 35,34,31,32	0 ~ 127	Image Correction MODE2:Level5:KEI_H~KEI_A Standard value32
404 ~411	SAM3_CONT_MD2_0_H + 48 ~ SAM3_CONT_MD2_0_A + 48	31,31,31,31, 35,35,31,31	0 ~ 127	Image Correction MODE2:Level6:KEI_H~KEI_A Standard value32
412 ~419	SAM3_CONT_MD2_0_H + 56 ~ SAM3_CONT_MD2_0_A + 56	30,31,31,31, 36,35,31,31	0 ~ 127	Image Correction MODE2:Level7:KEI_H~KEI_A Standard value32
420 ~427	SAM3_CONT_MD2_0_H + 64 ~ SAM3_CONT_MD2_0_A + 64	30,30,31,31, 36,36,31,31	0 ~ 127	Image Correction MODE2:Level8:KEI_H~KEI_A Standard value32
428 ~611	SAM3_CONT_MD2_0_H + 72 ~ SAM3_CONT_MD2_0_A + 248		0 ~ 127	Image Correction MODE2:Level9~31:KEI_H~KEI_A Not used
612 ~619	SAM3_CONT_MD3_0_H ~ SAM3_CONT_MD3_0_A	32,32,32,32, 32,32,32,32	0 ~ 127	Image Correction MODE3:Level0:KEI_H~KEI_A Standard value32
620 ~627	SAM3_CONT_MD3_0_H + 8 ~ SAM3_CONT_MD3_0_A + 8	31,32,32,32, 32,32,32,33	0 ~ 127	Image Correction MODE3:Level1:KEI_H~KEI_A Standard value32
628 ~635	SAM3_CONT_MD3_0_H + 16 ~ SAM3_CONT_MD3_0_A + 16	31,31,32,32, 32,32,33,33	0 ~ 127	Image Correction MODE3:Level2:KEI_H~KEI_A Standard value32
636 ~643	SAM3_CONT_MD3_0_H + 24 ~ SAM3_CONT_MD3_0_A + 24	31,31,31,32, 32,32,33,34	0 ~ 127	Image Correction MODE3:Level3:KEI_H~KEI_A Standard value32
644 ~651	SAM3_CONT_MD3_0_H + 32 ~ SAM3_CONT_MD3_0_A + 32	31,31,31,31, 32,32,34,34	0 ~ 127	Image Correction MODE3:Level4:KEI_H~KEI_A Standard value32
652 ~659	SAM3_CONT_MD3_0_H + 40 ~ SAM3_CONT_MD3_0_A + 40	31,31,31,31, 31,32,34,35	0 ~ 127	Image Correction MODE3:Level5:KEI_H~KEI_A Standard value32
660 ~667	SAM3_CONT_MD3_0_H + 48 ~ SAM3_CONT_MD3_0_A + 48	31,31,31,31, 31,31,35,35	0 ~ 127	Image Correction MODE3:Level6:KEI_H~KEI_A Standard value32
668 ~675	SAM3_CONT_MD3_0_H + 56 ~ SAM3_CONT_MD3_0_A + 56	30,31,31,31, 31,31,35,36	0 ~ 127	Image Correction MODE3:Level7:KEI_H~KEI_A Standard value32
676 ~683	SAM3_CONT_MD3_0_H + 64 ~ SAM3_CONT_MD3_0_A + 64	30,30,31,31, 31,31,36,36	0 ~ 127	Image Correction MODE3:Level8:KEI_H~KEI_A Standard value32
684 ~867	SAM3_CONT_MD3_0_H + 72 ~ SAM3_CONT_MD3_0_A + 248		0 ~ 127	Image Correction MODE3:Level9~31:KEI_H~KEI_A Not used
<b>Group: 33 SAM3 Color Management &lt;&lt;Uses external memory&gt;&gt;</b>				
0	SAM3_COLM_YRANGE_ud	8	0 ~ 32	Range of Brightness(Y)
1	SAM3_COLM_UVPHASE_ud	6	0 ~ 32	Range of Color differential degree
2	SAM3_COLM_UVCOMPRESS_ud	95	50 ~ 100	Compressing rate at UV conversion
3	SAM3_COLM_MINSLOPE_ud	3	0 ~ 10	Minimum slope of $E_c$ correction
4	SAM3_COLM_MAXSLOPE_ud	18	10 ~ 30	Maximum slope of $E_c$ correction
5	SAM3_COLM_CONVERGEPT_ud	3	1 ~ 5	Number of $E_c$ correction points
6	SAM3_COLM_BASE_X_ud	122	0 ~ 1024	Horizontal reference at color acquisition: X
7	SAM3_COLM_BASE_Y_ud	8	0 ~ 1024	Horizontal reference at color acquisition: Y
8	SAM3_COLM_GET_KIND_Y_ud	9	1, 3, 5, 9	Number of points at color acquisition:
9	SAM3_COLM_NSHOW_YRANGE	32	0 ~ 64	Range of display brightness (Y)
10	SAM3_COLM_FSHOW_UVNORM	3	0 ~ 10	Range of display color differential gain
11	SAM3_COLM_FSHOW_UVPHASE	100	0 ~ 900	Range of display[unit: degrees]
12	SAM3_COLM_FCUT_UVNORM	50	0 ~ 640	Minimum UV color correction value
13	SAM3_COLM_NCURT_CORDMINY	0	0 ~ 127	Minimum value of brightness at color phase correction
14	SAM3_COLM_NCURT_CORDMAXY	255	128 ~ 255	Maximum value of brightness at color phase correction
15	SAM3_COLM_SCI_COLORSEND_ud	0	0 ~ 4	
16	SAM3_COLM_VIEW_YINC_ud	76	0 ~ 128	Incremental value for display
17	SAM3_COLM_VIEW_RINC_ud	4	0 ~ 8	Incremental value for R-display
18	SAM3_COLM_VIEW_GINC_ud	4	0 ~ 8	Incremental value for G-display
19	SAM3_COLM_VIEW_BINC_ud	4	0 ~ 8	Incremental value for B-display
20	SAM3_COLM_GENERAL_PARAM_ud	98	0 ~ 255	Reserved
21	SAM3_COLM_PC_XS_N_ud	180	0 ~ 2048	Move range of mouse cursor, PC X start position(Screen Normal)

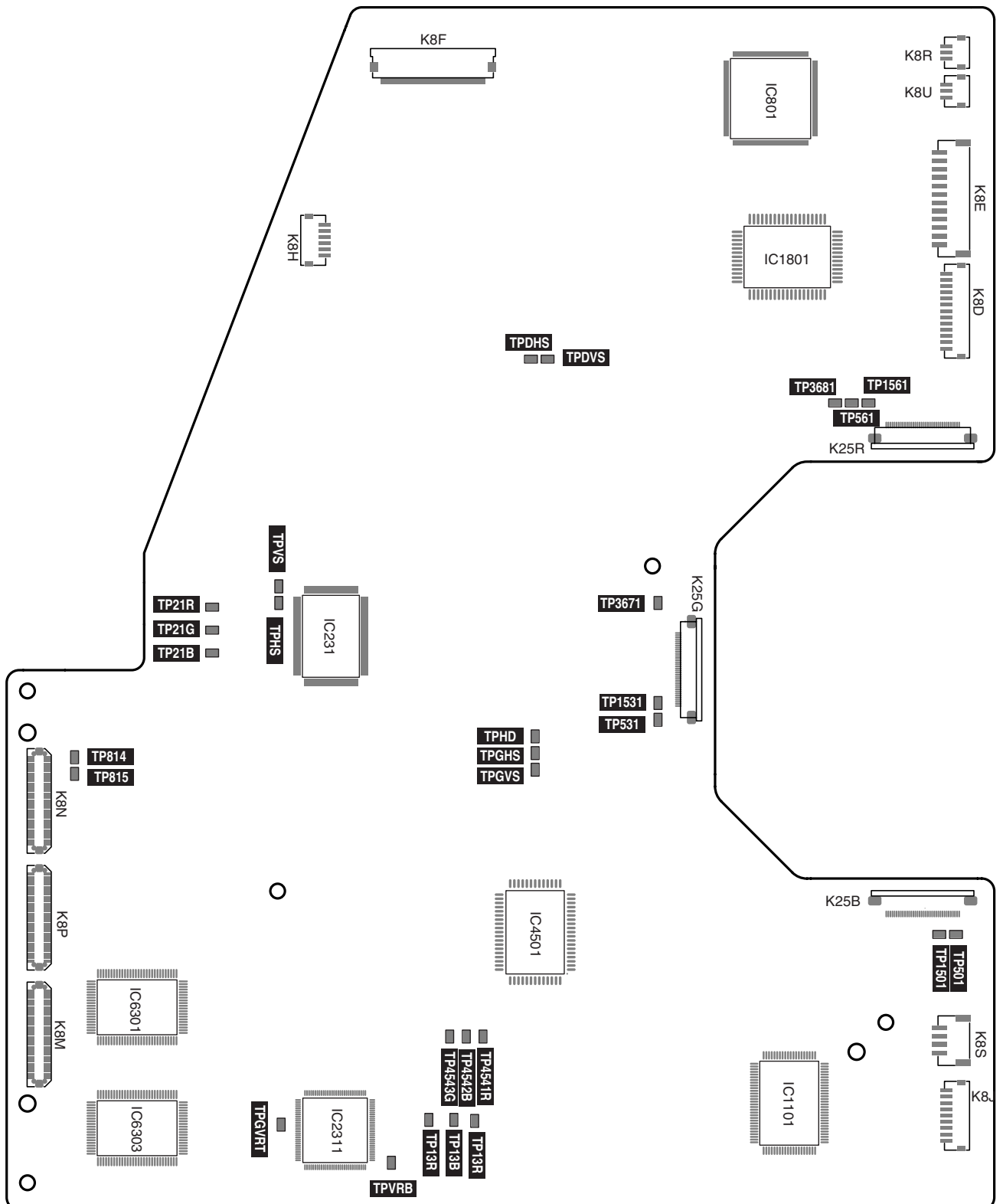
No.	Adjustment Item	Initial Value	Range	Input source / Description
22	SAM3_COLM_PC_XE_N_ud	1201	0 ~ 2048	Move range of mouse cursor, PC X end position(Screen Normal)
23	SAM3_COLM_PC_YS_N_ud	0	0 ~ 2048	Move range of mouse cursor, PC Y start position(Screen Normal)
24	SAM3_COLM_PC_YE_N_ud	765	0 ~ 2048	Move range of mouse cursor, PC Y end position(Screen Normal)
25	SAM3_COLM_PC_XS_N_ud	10	0 ~ 2048	Move range of mouse cursor, PC X start position(Screen Full)
26	SAM3_COLM_PC_XE_N_ud	1368	0 ~ 2048	Move range of mouse cursor, PC X end position(Screen Full)
27	SAM3_COLM_PC_YS_N_ud	0	0 ~ 2048	Move range of mouse cursor, PC Y start position(Screen Full)
28	SAM3_COLM_PC_YE_N_ud	765	0 ~ 2048	Move range of mouse cursor, PC Y end position(Screen Full)
29	SAM3_COLM_AV_XS_N_ud	180	0 ~ 2048	Move range of mouse cursor, AV X start position(Screen Normal)
30	SAM3_COLM_AV_XE_N_ud	1201	0 ~ 2048	Move range of mouse cursor, AV X end position(Screen Normal)
31	SAM3_COLM_AV_YS_N_ud	0	0 ~ 2048	Move range of mouse cursor, AV Y start position(Screen Normal)
32	SAM3_COLM_AV_YE_N_ud	765	0 ~ 2048	Move range of mouse cursor, AV Y end position(Screen Normal)
33	SAM3_COLM_AV_XS_N_ud	10	0 ~ 2048	Move range of mouse cursor, AV X start position(Screen Full)
34	SAM3_COLM_AV_XE_N_ud	1368	0 ~ 2048	Move range of mouse cursor, AV X end position(Screen Full)
35	SAM3_COLM_AV_YS_N_ud	0	0 ~ 2048	Move range of mouse cursor, AV Y start position(Screen Full)
36	SAM3_COLM_AV_YE_N_ud	765	0 ~ 2048	Move range of mouse cursor, AV Y end position(Screen Full)
<b>Group: 40 Option</b>				
0	Lamp Time Monitor	-	-	Read only
1	RS232C Baudrate	0	0 ~ 1	0: 19200bps 1: 9600bps
2	Shootout Mode	0	0 ~ 1	1: Shoot Out Mode Enable 0: Disable
3	Cooling Time	3	0 ~ 15	Cooling time set 1:30sec. 3:90sec. 15:450sec. 0:continuous On
4	Hi-Land SW	0	0 ~ 255	0: normal mode(normal operation) 1: High land mode(Fan:max speed)
5	V-Douki SW	0	0 ~ 1	0:V synchronize 1:V not synchronize
6	LampTotalTime	-	-	Projector total use time, read only
7	Netboard_rst_enable	1	0 ~ 1	Network board reset ON/OFF
8	Keystone Option	0	0 ~ 1	0: Fixed limitation value 1:Variable depending on the source
9	PW_HANG_ON_F	0	0 ~ 1	
<b>Group: 41 Fan Control</b>				
0	FAN_TEMP_A_WARNING	48	30 ~ 100	Temperature A to judge the temp. abnormality at room
1	FAN_TEMP_B_WARNING	66	30 ~ 100	Temperature B to judge the temp. abnormality at Optical unit
2	FAN_TEMP_C_WARNING	18	0 ~ 100	Temperature C to judge the temp. abnormality by filter cloggle
3	FAN_CONTROL_SW	0	0 or 1	0:Auto FanControl 1: Manual
4	FAN_A_SPEED	200	0 ~ 255	FAN_CONTROL_SW, effective only 1
5	FAN_B_SPEED	235	0 ~ 255	
6	FAN_TEMP_A_MONI	-	-	Read only
7	FAN_TEMP_B_MONI	-	-	
8	FAN_TEMP_C_MONI	-	-	
9	FAN_TEMP_B_AV_OFFSET	3	0 ~ 100	Judgement of sensor B (Optical), offset value at AV mode
<b>Group: 500 ADC for Pixel Works</b>				
0	ADC G-OFFSET	45	0 ~ 127	* G-Pedestal Adj. * B-Pedestal Adj. * R-Pedestal Adj.
1	ADC B-OFFSET	45	0 ~ 127	
2	ADC R-OFFSET	45	0 ~ 127	
3	ADC G-GAIN	69	0 ~ 255	
4	ADC B-GAIN	69	0 ~ 255	
5	ADC R-GAIN	69	0 ~ 255	
6	ADC BandWidth PC	0	0 ~ 3	
7	ADC BandWidth AV	3	0 ~ 3	
<b>Group: 510 NTSC Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1746	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H, related to IMAGE_SIZE_IN_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	384	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	37	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	458	0 ~ 2048	
5	CLAMP	0	0 ~ 2048	
6	STRATCH	450	0 ~ 819	
7	TOTAL DOTS(FULL)	1746	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H, related to IMAGE_SIZE_IN_H
8	TOTAL DOTS(ZOOM)	1746	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H, related to IMAGE_SIZE_IN_H
9	TOTAL DOTS(WZOOM)	1746	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H, related to IMAGE_SIZE_IN_H
10	DISP DOTS(FULL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
11	DISP DOTS(ZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
12	DISP DOTS(WZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
13	H BACK PORCTH(FULL)	384	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
14	H BACK PORCTH(ZOOM)	384	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
15	H BACK PORCTH(WZOOM)	384	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
16	V BACK PORCTH(FULL)	37	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V

No.	Adjustment Item	Initial Value	Range	Input source / Description
17	V BACK PORCTH(ZOOM)	37	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
18	V BACK PORCTH(WZOOM)	37	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
<b>Group: 511 PAL Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1792	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	451	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	53	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	536	0 ~ 2048	
5	CLAMP	0	0 ~ 2048	
6	STRATCH	450	0 ~ 819	
7	TOTAL DOTS(FULL)	1792	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
8	TOTAL DOTS(ZOOM)	1792	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
9	TOTAL DOTS(WZOOM)	1792	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
10	DISP DOTS(FULL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
11	DISP DOTS(ZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
12	DISP DOTS(WZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
13	H BACK PORCTH(FULL)	451	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
14	H BACK PORCTH(ZOOM)	451	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
15	H BACK PORCTH(WZOOM)	451	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
16	V BACK PORCTH(FULL)	53	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
17	V BACK PORCTH(ZOOM)	53	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
18	V BACK PORCTH(WZOOM)	53	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
<b>Group: 512 HDTV 1080i-60 Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1602	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	361	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	41	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	1053	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
<b>Group: 513 HDTV 1080i-50 Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1922	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	332	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	38	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	1052	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
<b>Group: 514 HDTV 1035i Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1602	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	361	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	78	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	1011	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	411	0 ~ 819	
<b>Group: 515 HDTV 720p Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1524	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1154	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	956	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	45	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	701	0 ~ 2048	
5	CLAMP	8	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
<b>Group: 516 HDTV 575p Gakaku for Pixel Works</b>				
0	TOTAL DOTS(NORMAL)	1874	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	1199	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	86	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	543	0 ~ 2048	
5	CLAMP	8	0 ~ 2048	
6	STRATCH	409	0 ~ 819	

No.	Adjustment Item	Initial Value	Range	Input source / Description
7	TOTAL DOTS(FULL)	1874	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
8	TOTAL DOTS(ZOOM)	1874	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
9	TOTAL DOTS(WZOOM)	1874	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
10	DISP DOTS(FULL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
11	DISP DOTS(ZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
12	DISP DOTS(WZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
13	H BACK PORCTH(FULL)	1199	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
14	H BACK PORCTH(ZOOM)	1199	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
15	H BACK PORCTH(WZOOM)	1199	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
16	V BACK PORCTH(FULL)	86	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
17	V BACK PORCTH(ZOOM)	86	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
18	V BACK PORCTH(WZOOM)	86	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
Group: 517 HDTV 480p Gakaku for Pixel Works				
0	TOTAL DOTS(NORMAL)	1708	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
1	DISP DOTS(NORMAL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
2	H BACK PORCTH(NORMAL)	1016	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
3	V BACK PORCTH(NORMAL)	73	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
4	DISP LINE	460	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
7	TOTAL DOTS(FULL)	1708	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
8	TOTAL DOTS(ZOOM)	1708	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
9	TOTAL DOTS(WZOOM)	1708	0 ~ 2048	IP: Linked with IMAGE_IN_TOTAL_H
10	DISP DOTS(FULL)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
11	DISP DOTS(ZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
12	DISP DOTS(WZOOM)	1364	0 ~ 2048	IP: Related to IMAGE_IN_SIZE_H
13	H BACK PORCTH(FULL)	1016	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
14	H BACK PORCTH(ZOOM)	1016	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
15	H BACK PORCTH(WZOOM)	1016	0 ~ 2048	IP: Linked with SUNC_OUT_DELAY_H
16	V BACK PORCTH(FULL)	73	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
17	V BACK PORCTH(ZOOM)	73	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
18	V BACK PORCTH(WZOOM)	73	0 ~ 2048	IP: Linked with SYNC_OUT_DELAY_V
Group: 518 RGB NTSC Gakaku for Pixel Works				
0	TOTAL DOTS	1308	0 ~ 2048	RGB NTSC
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCTH	223	0 ~ 2048	
3	V BACK PORCTH	43	0 ~ 2048	
4	DISP LINE	462	0 ~ 2048	
5	CLAMP	4	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
Group: 519 RGB PAL Gakaku for Pixel Works				
0	TOTAL DOTS	1342	0 ~ 2048	RGB PAL
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCTH	256	0 ~ 2048	
3	V BACK PORCTH	58	0 ~ 2048	
4	DISP LINE	539	0 ~ 2048	
5	CLAMP	4	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
Group: 520 RGB 1080i Gakaku for Pixel Works				
0	TOTAL DOTS	1610	0 ~ 2048	RGB NTSC
1	DISP DOTS	1372	0 ~ 2048	
2	H BACK PORCTH	186	0 ~ 2048	
3	V BACK PORCTH	51	0 ~ 2048	
4	DISP LINE	1052	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	409	0 ~ 819	
Group: 521 RGB 1035i Gakaku for Pixel Works				
0	TOTAL DOTS	1604	0 ~ 2048	RGB NTSC
1	DISP DOTS	1366	0 ~ 2048	
2	H BACK PORCTH	186	0 ~ 2048	
3	V BACK PORCTH	87	0 ~ 2048	
4	DISP LINE	1014	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
6	STRATCH	409	0 ~ 819	

## Test Points and Locations

### ● MAIN BOARD



## No Power

The possible causes of No Power are listed below. Please check following and refer to power supply and protection circuits diagram in the figure opposite.

### **1. Stop the operation of power supply circuit due to detection of abnormality.**

- Detected the abnormality on the secondary power supply lines.  
Power failure detection diodes detect an abnormal voltage on the power supply. Check the shortage of secondary circuits, ICs, condensers, etc.  
Check power supply lines, 9VA and 15.7V on the Drive Board, and 3.3V, 5VD, 5VA, 5SV, 9V and 15.5V on the Main Board.  
Check detection diodes, D1653, D1604 on the Drive Board, and D235, D236, D2352, D2353, D234, D2351, D1101, D1113, D451, D9551, D4291, D3101, D3102, D4054, D3501, D3601 and D4814 on the Main Board.
- Detected the operation stop of cooling fans.  
Power failure detection diodes detect the fan operation stop. Check Fans FN901, FN902, FN903, FN904, FN905 and FN906.  
Check fan's power supply lines and detection diodes and transistors D6610, D6612, D6613, D6614, D6615, D6616, D6617, D6618 and Q6609 on the Power Sub Board.
- Detected the abnormal temperature rise inside the projector.  
Temperature sensor ICs detect abnormal temperature. Check peripheral circuits and sensor ICs IC1691 on the Sensor1 Board, IC1871 and IC1872 on the Main Board.  
Thermal switch (SW905) detects abnormal temperature. Check peripheral circuits and SW905.  
SW905..... short in normal  
SW905 opens when peripheral temperature is over 90°C.
- Detected the abnormality on the lamp ballast unit.  
The lamp ballast unit outputs error signal (LAMP\_DET) to pin 123 of IC801.  
LAMP\_DET ..... High in abnormal
- Detected the over load/over voltage on power supply circuit.  
Feedback circuits detect over load or over voltages.  
Check PC602 and peripheral circuits on Power Board.
- Operated the mechanical protect on the Interlock switch (SW902). Check lamp cover fixed correctly.
- Fuse (F601) open.

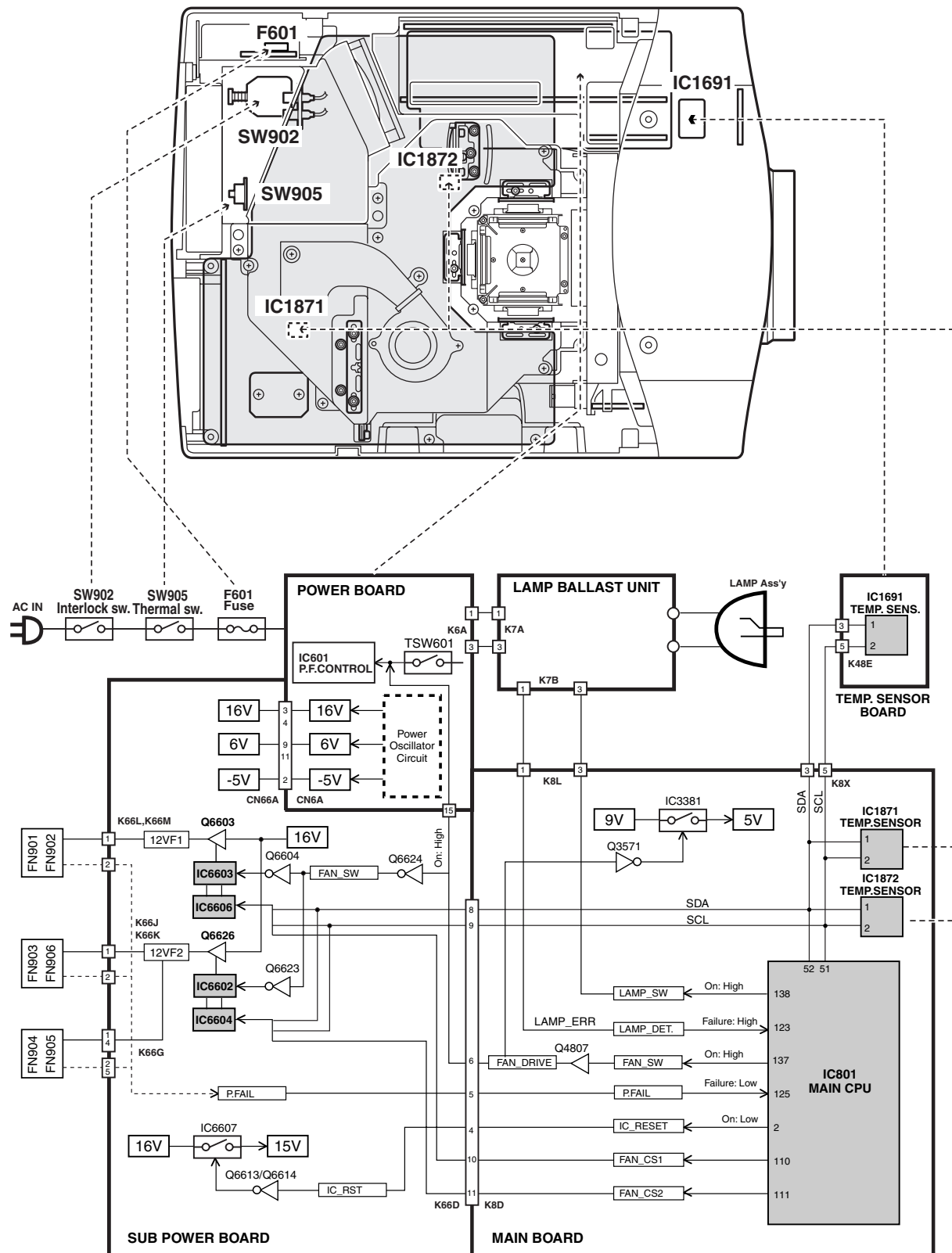
### **2. Abnormality occurs on drive signals for power or lamp circuit.**

- Abnormality on power starter signals (FAN\_DRIVE/ FAN\_SW).  
FAN\_SW signal is output from pin 137 of IC801 and applied to power switching circuit through Q4807. It drives the power oscillation circuit in the Power Board and power supply for the cooling fans in the Sub Power Board.  
FAN\_DRIVE/FAN\_SW.... High in power on  
Check FAN\_DRIVE and FAN\_SW signals, switching circuit Q6623, Q6624, Q6604, IC6604, IC6606, IC6603, IC6606 and peripheral circuit on the Sub Power Board.
- Abnormality on fan drive signal (IC\_RESET).  
IC\_RESET signal is output from pin 2 of IC801 and sent to Q6616, Q6612 and Q6613 on the Sub Power Board. They switch power supply lines, 9V, 10VA, 15.7V, 15VP, 3.4V.  
IC\_RESET ..... High in power on  
Check IC\_RESET signal, IC801 on the Main Board, drive transistors and ICs Q6616, Q6617, Q6612, Q6611, Q6613, Q6626, Q6602, Q6628, IC6608, IC6618, IC6607, IC6601, IC6616 and peripheral circuits.
- Abnormality on power drive signal (LAMP\_SW).  
LAMP\_SW signal is output from pin 138 of IC801 and sent to pin 3 of K8L on the Main Board to drive the Lamp Ballast Unit.  
LAMP\_SW ..... High in power on  
Check LAMP\_SW signal, IC801 and peripheral circuits.

### **3. Abnormality occurs on the power circuit.**

- Abnormality on power primary circuit  
Check Line filters, L601, L602, D604, Q601, DS601, L611, IC651, D632, etc.
- Abnormality on power secondary circuit  
Check D681, D682, D683, IC681, etc.

# Power supply drive and protection diagrams and locations





## No Picture

The possible causes of No Picture are listed below. Please check following and refer to video signal processing diagrams in the figure opposite.

### 1. No picture from Video source

#### Composite Video Input

Check composite video signal at pins 3 and 4 of K10R on AV Board and K8A on Main Board.

Check Y, C signals at pins 15 and 14 of IC1141.

Check Y, C signals at pins 5 and 7 of IC3101.

Check IN2/IN3 signal at pin 22 of IC101.

IN2 : Low, IN3 : High

#### S-Video Input

Check S-video signals at pins 47-48 (Y), 51-52(C) of K10R and K8A.

Check Y, C signals at pins 43 and 44 of IC3101.

#### Component Input

Check component signals at pins 7-8 (Pb), 11-12 (Pr) and 3-4 (Y) of K10R and K8A.

Check component signals (Y, Pr, Pb) at pins 19, 18 and 17 of IC3101.

Check IN2/IN3 signal at pin 22 of IC101.

IN2 : Low, IN3 : High

#### All of video signals

Check component signals (Y, Cr, Cb) at pins 33, 34 and 35 of IC4001.

Check component signals (Y, Cr, Cb) at pins 20, 21 and 22 of IC4501.

Check component signals (Y, Pr, Pb) at pins 41, 42 and 43 of IC4001.

Check Sync signals (AV\_HSYNC, AV\_VSYNC) at pins 4 and 9 of IC3101.

Check Sync signals (AV\_HSYNC, AV\_VSYNC) at pins 4, 36, 5 and 37 of IC4001.

Check RGB signals at test points TP4541R, TP4542G and TP4543B.

Check RGB signals at test points TP13R, TP13G and TP13B.

Check RGB signals at pins 8, 10 and 12 of IC201.

Check Sync signals at test points TPGHS and TPGVS.

Check AV/CG1 switching signal at pin 22 of IC201 and pin 1 of IC3224.

AV : Low, CG : High

### 2. No picture from Computer source

Check RGB signals at pins 19-20, 23-24 and 27-28 of K10Q on AV Board and K8B on Main Board.

Check Sync signals (CG\_HSYNC, CG\_VSYNC) at pins 11-12 and 13-14) of K10Q on the AV Board and K8B on the Main Board.

Check RGB signals at test points TP21R, TP21G and TP21B.

Check sync signals at test point TPHS and TPVS.

Check CG1/CG2 switching signal at pin 22 of IC5201 and pins 16 of IC5204. The CG1/CG2 switching signal is output from pin 50 of IC1801.

CG1 : Low, CG2 : High

Check CG/HD switch signal at pin 22 of IC201 and pins 9, 10 of IC3231. The CG/HD signal is out put from pin 52 of IC1801.

CG : Low, HD : High

### 3. No picture from both of Video and Computer sources.

Check RGB signals at test points TP21R, TP21G and TP21B.

Check HSYNC signal at test point TPHS and VSYNC signal at TPVS.

### 4. No picture from DVI source.

Check 5V power supply(5VDVI) at pins 1 and 2 of K10P.

Check Sync signal at pins 47 and 48 of IC8001.

Check ICs IC8001 and peripheral circuits.

### 5. No picture from all of sources

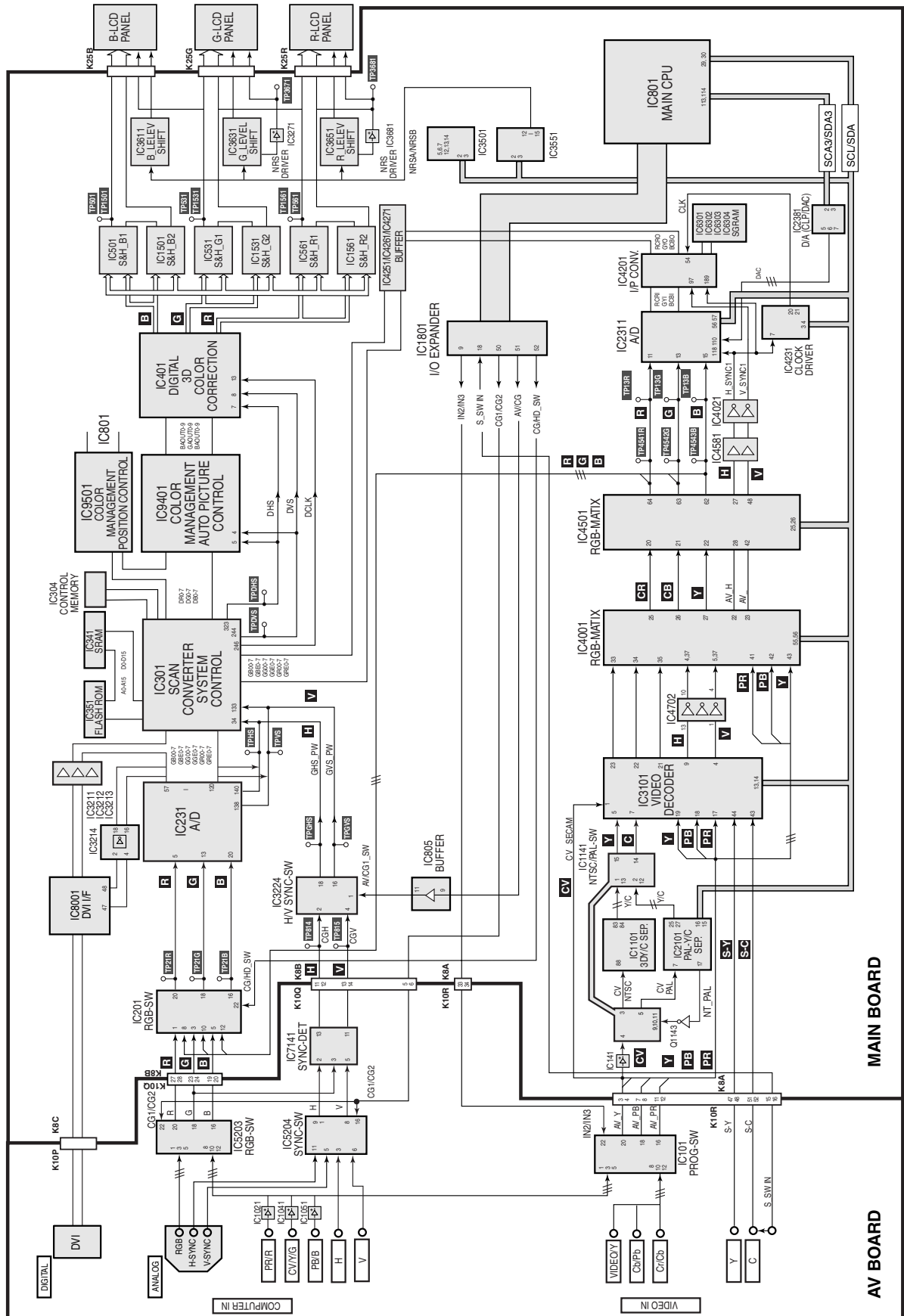
Check RGB S&H signals at test points TP501, TP1501, TP531, TP1531, TP561 and TP1561.

Check NRS signal at test point TP3671 and TP3681.

Check power supply circuit 15.5V and 15VP and peripheral circuit.

Check ICs IC501, IC531, IC561, IC1501, IC1531, IC1561, IC9401, IC401, IC3301 and peripheral circuits.

SIGNAL	K10Q/K8B	SIGNAL	K10R/K8A
CG1/CG2-SW	5-6	AV_Y/Video	3-4
H-Sync	11-12	AV_PB	7-8
V-Sync	13-14	AV_PR	11-12
B	19-20	S_SW-IN	15-16
G	23-24	IN2/IN3-SW	33-34
R	27-28	S-Y	47-48
		S-C	51-52



## No Sound

### 1. No audio signals at AV input circuit.

Check audio signals at pins 1, 13 (CG1), 5, 14 (CG2) and 2, 12 (VIDEO) of IC5011 on the AV Board. Check IC5011 and peripheral circuits.

### 2. Incorrect operation of Input mode switching.

Check AUDIO\_SW1/AUDIO\_SW2 switching signals at pins 9 and 10 of IC5011. The AUDIO\_SW1/AUDIO\_SW2 signals are output from pins 4 and 5 of IC1801. See the truth table below for input mode selection.

Logic Table of IC5011		
Pin 10	Pin 9	Mode
L	L	COMPUTER 1
H	L	COMPUTER 2
L	H	VIDEO

### 3. No audio output signal at speakers.

Check audio signals at pins 3, 4 and 1, 2 of K16U on M Drive Board.

Check MUTE signal at pin 8 of K16R/K8T.

The MUTE signal is output from pin 48 of IC1801.

Mute On : High

Check MUTE signal at pins 3 and 14 of IC1652.

Check sound volume signal at pin 7 of K16R/K8T.

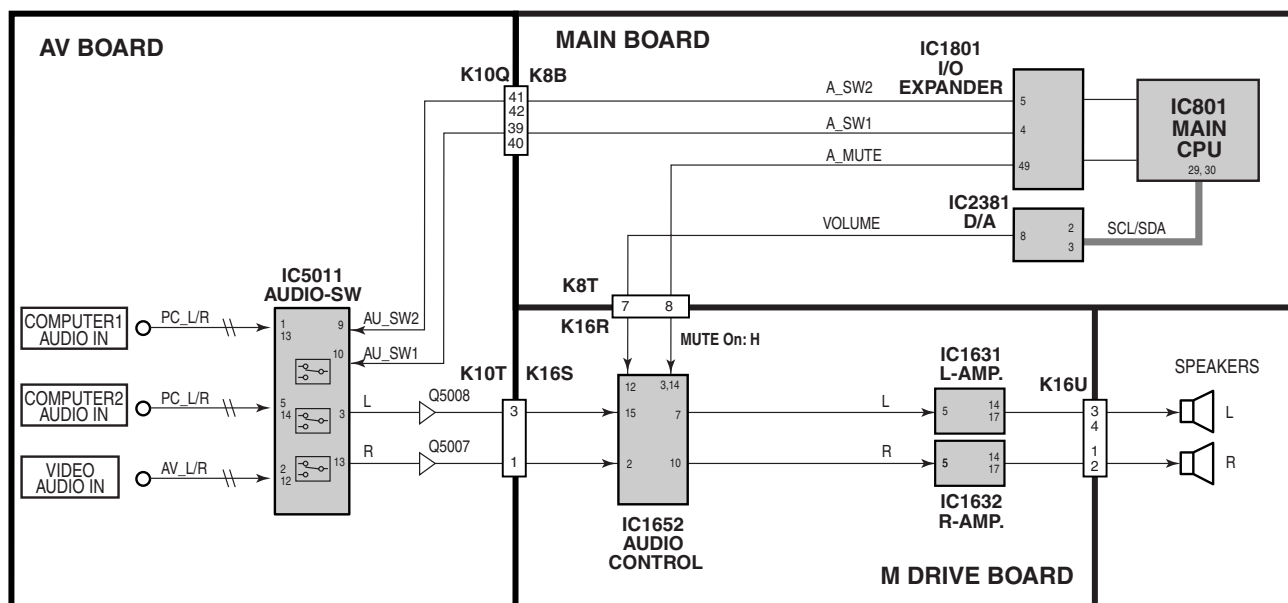
The VOLUME signal is output from pin 8 of IC2381 and it is controlled by IC801 via the IIC bus.

Volume Min.: Low

Check audio signals at IC1655, IC1631, IC1632 and peripheral circuits.

### 4. No power supply at audio circuit.

Check 9VA power supply line.



## Lens Motor Problems

### 1. No drive signals supplied at motors

Check drive signals at pins 1 and 2 of K16M for focus motor, pins 3 and 4 of K16M for zoom motor and pins 1 and 2 of K16L for lens shift motor on Power Board.  
Check drive signals at pins 2 and 10 of ICs IC1611, IC1602 and IC1601.  
Check ICs IC1611, IC1602 and IC1601 and peripheral circuits. Check motor drive power supply (15.7V).

Logic Table of IC1611/IC1602/IC1601				
Input		Output		Operation
5	6	10	2	
H	L	L	H	Forward drive
L	H	H	L	Reverse drive
H	H	L	L	Braking
L	L	-	-	Stand by

### 2. No drive signals supplied at motor drive ICs.

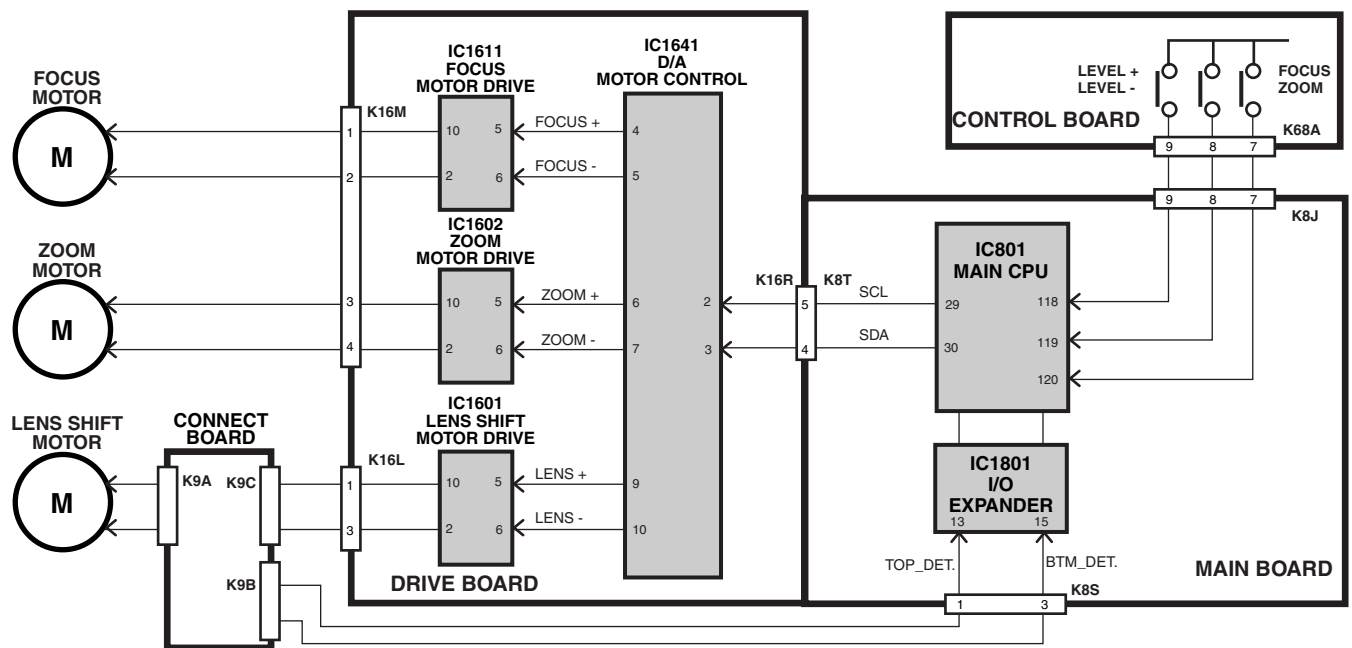
Check drive signals at pins 5 and 6 of ICs IC1611, IC1602 and IC1601. They are supplied from pins 4 and 5 for focus drive, pins 6 and 7 for zoom drive and pins 9 and 10 for lens shift drive of IC1641 D/A control IC.

### 3. No drive signals output from CPU.

The motor drive signals are supplied from IC801, main CPU, via the IIC bus control lines.

### 4. No key switch signals input to CPU.

Check signals at pins 118 to 120 of IC801 when pressing the key buttons. Check key buttons.



## ■ Control Port Functions

### ● System Control & I/O Port Table (IC801)

Pin No.	Name	Function Name	Function	Polarity	I/O
1	PA23/WRHH	USB RESET	USB reset signal	Active L	O
2	PE14/TIOC4C/DACK0/AH	IC RESET	Power ON/OFF control without FAN, LAMP	Active L	O
3	PA22/WRHL	CLB	Reserve for SAM3		O
4	PA21/CASHH	TEMP_RST			O
5	PE15/TIOC4D/DACK1/IRQOUT	POWER_SW	"L":Power OFF "H":Power ON		O
6	VSS	GND			
7	PC0/A0	ADDRESS0	Address Bus 0		O
8	PC1/A1	ADDRESS1	Address Bus 1		O
9	PC2/A2	ADDRESS2	Address Bus 2		O
10	PC3/A3	ADDRESS3	Address Bus 3		O
11	PC4/A4	ADDRESS4	Address Bus 4		O
12	VCC	5V			
13	PC5/A5	ADDRESS5	Address Bus 5		O
14	VSS	GND			
15	PC6/A6	ADDRESS6	Address Bus 6		O
16	PC7/A7	ADDRESS7	Address Bus 7		O
17	PC8/A8	ADDRESS8	Address Bus 8		O
18	PC9/A9	ADDRESS9	Address Bus 9		O
19	PC10/A10	ADDRESS10	Address Bus 10		O
20	PC11/A11	ADDRESS11	Address Bus 11		O
21	PC12/A12	ADDRESS12	Address Bus 12		O
22	PC13/A13	ADDRESS13	Address Bus 13		O
23	PC14/A14	ADDRESS14	Address Bus 14		O
24	PC15/A15	ADDRESS15	Address Bus 15		O
25	PB0/A16	ADDRESS16	Address Bus 16		O
26	VCC	5V			
27	PB1/A17	ADDRESS17	Address Bus 17		O
28	VSS	GND			
29	PA20/CASHL	SCL 1	IIC Bus 1 Clock		I/O
30	PA19/BACK/DRAK1	SDA 1	IIC Bus 1 Data		I/O
31	PB2/IRQ0/POE0/RAS	VCOF0	cx1250		O
32	PB3/IRQ1/POE1/CASL	VCOF1	cx1250		O
33	PA18/BREQ/DRAK0	SYS_SW			O
34	PB4/IRQ2/POE2/CASH	AFT-V	pixel 323pin DHS		I
35	VSS	GND			
36	PB5/IRQ3/POE3/RDWR	DE_DIF	DVI detection		I
37	PB6/IRQ4/A18/BACK	ADDRESS18	Address Bus 18		O
38	PB7/IRQ5/A19/BREQ	ADDRESS19	Address Bus 19		O
39	PB8/IRQ6/A20/WAIT	ADDRESS20	Address Bus 20		O
40	VCC	5V			
41	PB9/IRQ7/A21/ADTRG	ADDRESS21	Address Bus 21		O
42	VSS	GND			
43	PA14/RD	READ	Read signal	Active L	O
44	WDT0VF	SERKUTO	Over flow output from the watch dog timer		O
45	PD31/D31/ADTRG	RTS	RS232C RTS (Request To Send)		I
46	PD30/D30/IRQOUT	CTS	RS232C CTS (Clear To Send)		O
47	PA13/WRH	WRH	Write signal (upper 8 bit)	Active L	O
48	PA12/WRL	WRL	Write signal (lower 8 bit)	Active L	O
49	PA11/CS1	ET7050SELECT	Chip select switch for ET7050		O
50	PA10/CS0	CS0	Flash Memory Chip Select	Active L	O
51	PA9/TCLKD/IRQ3	SCL 2	IIC Bus 2 Clock		I/O
52	PA8/TCLKC/IRQ2	SDA 2	IIC Bus 2 Data		I/O
53	PA7/TCLKB/CS3	CS3	USB/IO EXP Chip Select	Active L	O
54	PA6/TCLKA/CS2	CS2	Chip select SAM3	Active L	O
55	VSS	GND			
56	PD29/D29/CS3	IP_OUT	Data write flag for IP converter IC		O
57	PD28/D28/CS2	PW_SEL			O
58	PD27/D27/DACK1	PW_INTR	PW_365 interrupt signal		O
59	PD26/D26/DACK0	PW_OUT1	PW_365 data output	Reserved	O
60	PD25/D25/DREQ1	PW_OUT0	PW_365 data output	Reserved	O
61	VSS	GND			
62	PD24/D24/DREQ0				
63	VCC	5V			
64	PD23/D23/IRQ7	IP_RESET	Reset for IP conversion IC		O
65	PD22/D22/IRQ6	DVI_OUT		DVI = L	O
66	PD21/D21/IRQ5	CG_HD		CG = L	O
67	PD20/D20/IRQ4	SAM3_INT	IRQ4		I
68	PD19/D19/IRQ3		Reserve for SAM3		O
69	PD18/D18/IRQ2	PW_IN1	PW365 data output	Reserved	I
70	PD17/D17/IRQ1	PW_IN0	PW365 data output	Reserved	I
71	VSS	GND			

## Control Port Functions

Pin No.	Name	Function Name	Function	Polarity	I/O
72	PD16/D16/IRQ0	reserv	PW_ICE		O
73	PD15/D15	DATA15	Data Bus 15		I/O
74	PD14/D14	DATA14	Data Bus 14		I/O
75	PD13/D13	DATA13	Data Bus 13		I/O
76	PD12/D12	DATA12	Data Bus 12		I/O
77	VCC	5V			
78	PD11/D11	DATA11	Data Bus 11		I/O
79	VSS	GND			
80	PD10/D10	DATA10	Data Bus 10		I/O
81	PD9/D9	DATA9	Data Bus 9		I/O
82	PD8/D8	DATA8	Data Bus 8		I/O
83	PD7/D7	DATA7	Data Bus 7		I/O
84	PD6/D6	DATA6	Data Bus 6		I/O
85	VCC	5V			
86	PD5/D5	DATA5	Data Bus 5		I/O
87	VSS	GND			
88	PD4/D4	DATA4	Data Bus 4		I/O
89	PD3/D3	DATA3	Data Bus 3		I/O
90	PD2/D2	DATA2	Data Bus 2		I/O
91	PD1/D1	DATA1	Data Bus 1		I/O
92	PD0/D0	DATA0	Data Bus 0		I/O
93	VSS	GND			
94	XTAL	XTAL	X'tal oscillator input		I
95	MD3	MODE3	Multiplex setting with Mode 2 (Set "H")		I
96	EXTAL	EXTAL	X'tal oscillator input		O
97	MD2	MODE2	Multiplex setting with Mode 3 (Set "L")	I	
98	NMI	NONMASK	Non-maskarable interrupted input		I
99	VCC (FWP)	FWP	Write mode for Flash memory		I
100	PA16/AH	FLASH MODE	FWP control		O
101	PA17/WAIT	WAIT	SAM3		O
102	MD1	MODE1	"MCU mode setting with Mode 0 (Set "H")"		
103	MD0	MODE0	"MCU mode setting with Mode 1 (Set "L")"		
104	PLLVC	PLLVC	Power supply for PLL circuit		
105	PLLCAP	PLLCAP	PLL filter		
106	PLLVSS	PLLGND	GND for PLL circuit		
107	PA15/CK	M-CLK	CPU clock output		O
108	RES	RESET	Reset	Active L	I
109	PE0/TIOC0A/DREQ0	ET7050SCS	Chip select for ET7050	Active L	O
110	PE1/TIOC0B/DRAK0	FAN_CS1	Chip select for FAN 1 control		O
111	PE2/TIOC0C/DREQ1	FAN_CS2	Chip select for FAN 2 control		O
112	VCC	5V			
113	PE3/TIOC0D/DRAK1	SDA3	IIC Bus 3 Data		I/O
114	PE4/TIOC1A	SCL3	IIC Bus 3 Clock		I/O
115	PE5/TIOC1B	USB_BRST	USB pullup registor ON/OFF		O
116	PE6/TIOC2A	SH_SEL	S&H select		O
117	VSS	GND			
118	PF0/AN0	KEY1	Key input 1 (A/D input)		I
119	PF1/AN1	KEY2	Key input 2 (A/D input)		I
120	PF2/AN2	KEY3	Key input 3 (A/D input)		I
121	PF3/AN3	OPT1	Destination option (A/D input)		I
122	PF4/AN4	OPT2	Panel maker option	Epsn:H	I
123	PF5/AN5	LAMP DET	Lamp error detection		I
124	AVSS	GND	GND for AD		
125	PF6/AN6	POWER FAIL	Power Fail (A/D input: power error at less than 2V)		I
126	PF7/AN7	SDATA IN	Serial data input		I
127	AVREF	5V	Reference voltage for A/D		
128	AVCC	5V	Power supply for A/D		
129	VSS	GND			
130	PA0/RXD0	PW_RX	PW365 Rx		I
131	PA1/TXD0	PW_TX	PW365 Tx		O
132	PA2/SCK0/DREQ0/IRQ0				
133	PA3/RXD1	Rx	RS232C Rx		I
134	PA4/TXD1	Tx	RS232C Tx		O
135	VCC	5V			
136	PA5/SCK1/DREQ1/IRQ1	USB INTR	USB interrupted signal input	Active L	I
137	PE7/TIOC2B	FAN SW	FAN ON/OFF output		O
138	PE8/TIOC3A	LAMP SW	LAMP ON/OFF output	Active H	O
139	PE9/TIOC3B	SDATA OUT	Serial data output		O
140	PE10/TIOC3C	SCLK	Serial clock output		O
141	VSS	GND			
142	PE11/TIOC3D	EXP RESET	I/O Expander	Active H	O
143	PE12/TIOC4A	R/C	Remote control signal input	Active L	I
144	PE13/TIOC4B/MRES	PW RESET	PW365 reset singal	Active L	O

## ● Parallel I/O Expander (IC1801, M66500FP)

Pin No.	Name	Function Name	Function	Polarity	I/O
1	PF6	CG_FILTER			O
2	PF7	D_TURBO_SEL	DIGITAL TURBO Select		O
3	Vcc	5V +-10%			-
4	PE0	A_SW1	Audio SW 1		O
5	PE1	A_SW2	Audio SW 2		O
6	PE2	SEL_BAISOKU	Double scan selectoion		O
7	PE3	AD_SEL			O
8	PE4				O
9	PE5	IN2/IN3_SW	input2/3 switch		O
10	PE6	PC_SWINV	Auto image		O
11	PE7	S_SW	S-input		O
12	GND3	GND			-
13	PB0	LENS_TOP	Lens Top detection	Top="L"	I
14	PB1				I
15	PB2	LENS_BOTTOM	Lens Bottom detection	Bottom="L"	I
16	PB3				I
17	PB4	COMP-DET	Component input on/off		I
18	PB5	S-SWIN	S- input on/off		I
19	PB6	V-DET	V-sync at C-Sync on/off		I
20	PB7	PC-DET			I
21	PA7				I
22	PA6	SEL_CTIN			I
23	PA5				I
24	PA4				I
25	PA3				I
26	PA2				I
27	PA1	DAC_SW	Service for G6-10,11,12		I
28	PA0	TURBO_LED	Bright LED output		I
29	Vcc		5V±10%		-
30	RD		Read Select	Active "L"	I
31	WR		Write Select	Active "L"	I
32	CS		Chip Select	Active "L"	I
33	RESET		EXP_RST	Active "H"	I
34	GND1	GND			-
35	A2		Port Select 2		I
36	A1		Port Select 1		I
37	A0		Port Select 0		I
38	D0		Data Bus 0		I/O
39	D1		Data Bus 1		I/O
40	D2		Data Bus 2		I/O
41	D3		Data Bus 3		I/O
42	D4		Data Bus 4		I/O
43	D5		Data Bus 5		I/O
44	D6		Data Bus 6		I/O
45	D7		Data Bus 7		I/O
46	PC7	MOUSE2	Mouse Select 2		O
47	PC6	NET_SW			O
48	PC5	WATT_SW			O
49	PC4	A_MUTE	Mute output		O
50	PC0	CG1/CG2	Computer 1/Computer 2 switch		O
51	PC1	AV/CG	Computer/Video switch		O
52	PC2	CG/HD_SW		CG="L"	O
53	PC3	DDC_CONT	DDC PC/CPU switch	CPU "H"	O
54	PG0				I
55	PG1				I
56	PG2				O
57	PG3	SCDT_DIF	DVI output switch	DVI="H"	O
58	GND2	GND			-
59	PF0		Temp Warning LED output	LED on="L"	O
60	PF1		Lamp Replace LED output	LED on="L"	O
61	PF2		Ready LED output	LED on="L"	O
62	PF3	PD_DIF	DVI signal switch _8001	DVI="H"	O
63	PF4	PD_DIF2	DVI signal switch _8051	DVI="H"	O
64	PF5	DDC_CONT_DVI	DDC_DVI PC/CPU switch	CPU "H"	O



### ● IIC Bus I/O Expander (IC1641, M62320FP) Port Functions

Pin No.	Name	Function	Action	I/O
1	SO	Serial data output (not connected)		O
2	SCL	IIC BUS SCL		I
3	SDA	IIC BUS SDA		I/O
4	D0	FOCUS+	Active "H"	O
5	D1	FOCUS-	Active "H"	O
6	D2	ZOOM+	Active "H"	O
7	D3	ZOOM-	Active "H"	O
8	Vss	GND		-
9	D4	LENS UP	Active "H"	O
10	D5	LENS DOWN	Active "H"	O
11	D6	BRIGHT ON	Active "H"	O
12	D7	BRIGHT OFF	Active "H"	O
13	Vdd	Power supply +5V +-10%		-
14	CS2	Slave address setting 2 (GND)		I
15	CS1	Slave address setting 1 (GND)		I
16	CS0	Slave address setting 0 (GND)		I

### ● IIC Bus DA Converter (IC3501, M62399FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	not used	O
5	A06	REF_B	O
6	A07	REF_G	O
7	A08	REF_R	O
8	VrefL	Lower reference voltage input for DAC	-
9	VrefU1	Upper reference voltage input for DAC (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	Upper reference voltage input for DAC (CH1~CH4)	-
12	A01	B_CENTER	O
13	A02	G_CENTER	O
14	A03	R_CENTER	O
15	A04	not used	O
16	Vcc	Power supply for output buffer(2.4*VrefU ~ 12V)	-
17	Vdd	Power supply +5V +-10%	-
18	CS2	Slave address setting port2 (GND)	I
19	CS1	Slave address setting port1 (GND)	I
20	CS0	Slave address setting port0 (Vdd)	I

### ● IIC Bus DA Converter (IC3551, M62399FP) Port Functions

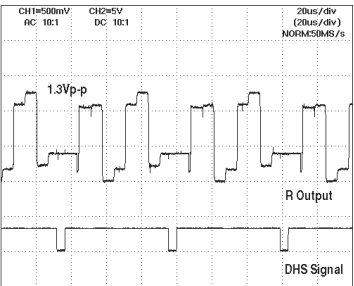
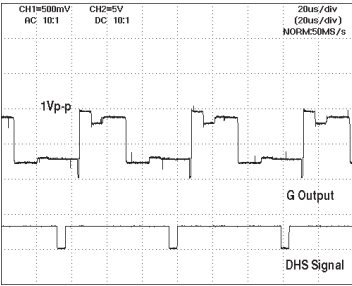
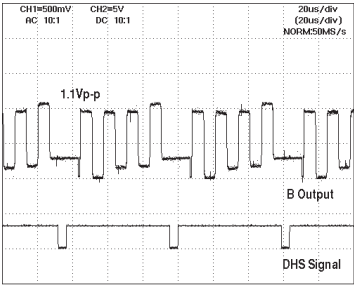
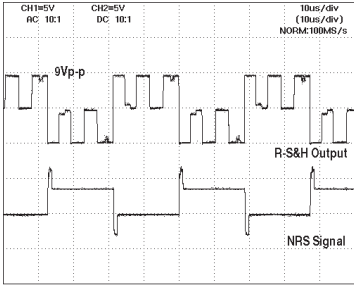
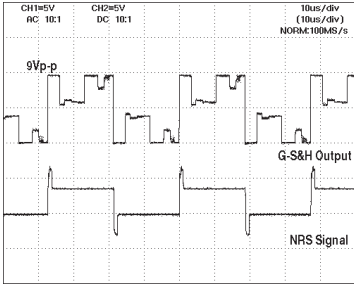
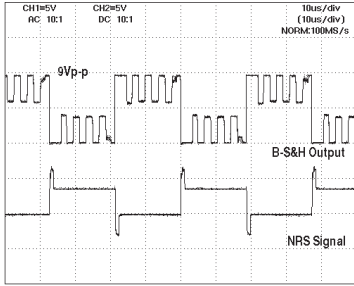
Pin No.	Name	Function	I/O
1	R	Serial data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	not_used	O
5	A06	V_COMR	O
6	A07	V_COMG	O
7	A08	V_COMB	O
8	VrefL	Lower reference voltage input for DAC	-
9	VrefU1	Upper reference voltage input for DAC (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	Upper reference voltage input for DAC (CH1~CH4)	-
12	A01	SIG1	O
13	A02	SIG2	O
14	A03	SIG3	O
15	A04	SIG4	O
16	Vcc	Power supply for output buffer(2.4*VrefU ~ 12V)	-
17	Vdd	Power supply +5V±10%	-
18	CS2	Slave address setting port2 (GND)	I
19	CS1	Slave address setting port1 (GND)	I
20	CS0	Slave address setting port0 (GND)	I

## ● IIC Bus DA Converter (IC2831, M62392FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A07	DAC_VR	
5	A08	DAC_R	O
6	A09	DAC_G	O
7	A10	DAC_B	O
8	A11	Volume	O
9	A12	not used	
10	VrefL	Lower reference voltage input for DAC	-
11	VrefU1	Upper reference voltage input for DAC (CH5~CH8)	-
12	Vss	GND	-
13	VrefU2	Upper reference voltage input for DAC (CH1~CH4)	-
14	A01	not used	
15	A02	not used	
16	A03	AV_RCLP	O
17	A04	AV_GCLP	O
18	A05	AV_BCLP	O
19	A06	VCO_F2	O
20	Vcc	Power supply for output buffer(4.5V ~ 5.5V)	-
21	Vdd	Power supply +5V+-10%	-
22	CS2	Slave address setting port2 (GND)	I
23	CS1	Slave address setting port1 (Vdd)	I
24	CS0	Slave address setting port0 (GND)	I

# Waveforms

<b>VIDEO-IN &lt;IC141-3&gt;</b>	<b>Y-IN &lt;IC3101-5&gt;</b>	<b>C-IN &lt;IC3101-7&gt;</b>
<b>AV_HSYNC &lt;IC3101-9&gt;</b>	<b>AV_VSYNC &lt;IC3101-4&gt;</b>	<b>Sandcastle-OUT &lt;IC3101-10&gt;</b>
<b>VIDEO_Y &lt;IC4001-35&gt;</b>	<b>VIDEO_CB &lt;IC4001-34&gt;</b>	<b>VIDEO_CR &lt;IC4001-33&gt;</b>
<b>Y_OUT &lt;IC4501-20&gt;</b>	<b>CB_OUT &lt;IC4501-21&gt;</b>	<b>CR_OUT &lt;IC4501-22&gt;</b>
<b>VIDEO_R &lt;TP4541R/TP13R&gt;</b>	<b>VIDEO_G &lt;TP4543G/TP13G&gt;</b>	<b>VIDEO_B &lt;TP4542B/TP13B&gt;</b>

CG_ROUT <IC231-5>	CG_GOUT <IC231-13>	CG_BOUT <IC231-20>
		
R-S&H OUT <TP561/TP1561>	G-S&H OUT <TP531/TP1531>	B-S&H OUT <TP501/TP1501>
		

## ■ Cleaning

After long periods of use, dust and other particles will accumulate on the LCD panel, prism, mirror, polarized glass, lens, etc., causing the picture to darken or color to blur. If this occurs, clean the inside of optical unit.

Remove dust and other particles using air spray. If dirt cannot be removed by air spray, disassemble and clean the optical unit.

### Cleaning with air spray

1. Remove the cabinet top following to “Mechanical Disassemblies”.
2. Clean up the LCD panel and polarizing plate by using the air spray from the cabinet top opening.

#### **Caution:**

Use a commercial (inert gas) air spray designed for cleaning camera and computer equipment. Use a resin-based nozzle only. Be very careful not to damage optical parts with the nozzle tip. Never use any kind of cleanser on the unit. Also, never use abrasive materials on the unit as this may cause irreparable damage.

### Disassembly Cleaning

Disassembly cleaning method should only be performed when the unit is considerably dirty and cannot be sufficiently cleaned by air spraying alone.

**Be sure to readjust the optical system after performing disassembly cleaning.**

1. Remove the cabinet top and main units following to “Mechanical Disassemblies”.
2. Remove the optical base top following to “Optical Unit Disassemblies”. If the LCD panel needs cleaning, remove the LCD panel unit following to “LCD panel replacement”.
3. Clean the optical parts with a soft cloth. Clean extremely dirty areas using a cloth moistened with alcohol.

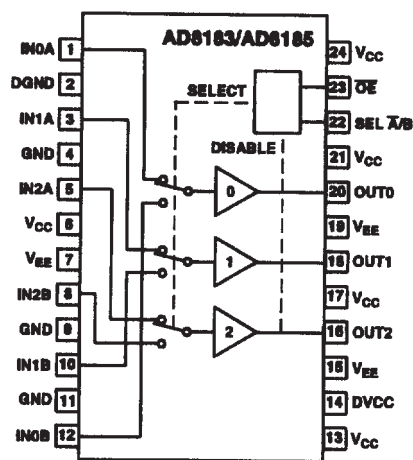
#### **Caution:**

The surface of the optical components consists of multiple dielectric layers with varying degrees of refraction. Never use organic solvents (thinner, etc.) or any kind of cleanser on these components.

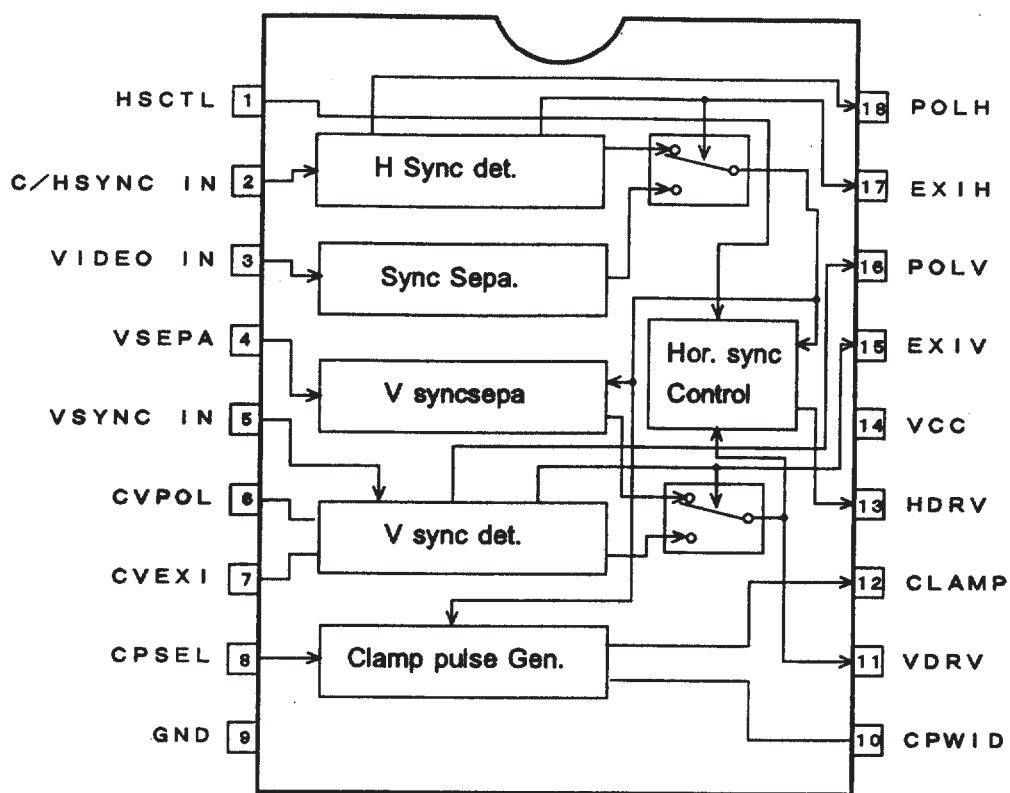
Since the LCD panel is equipped with an electronic circuit, never use any liquids (water, etc.) to clean the unit. Use of liquid may cause the unit to malfunction.

## ■ IC Block Diagrams

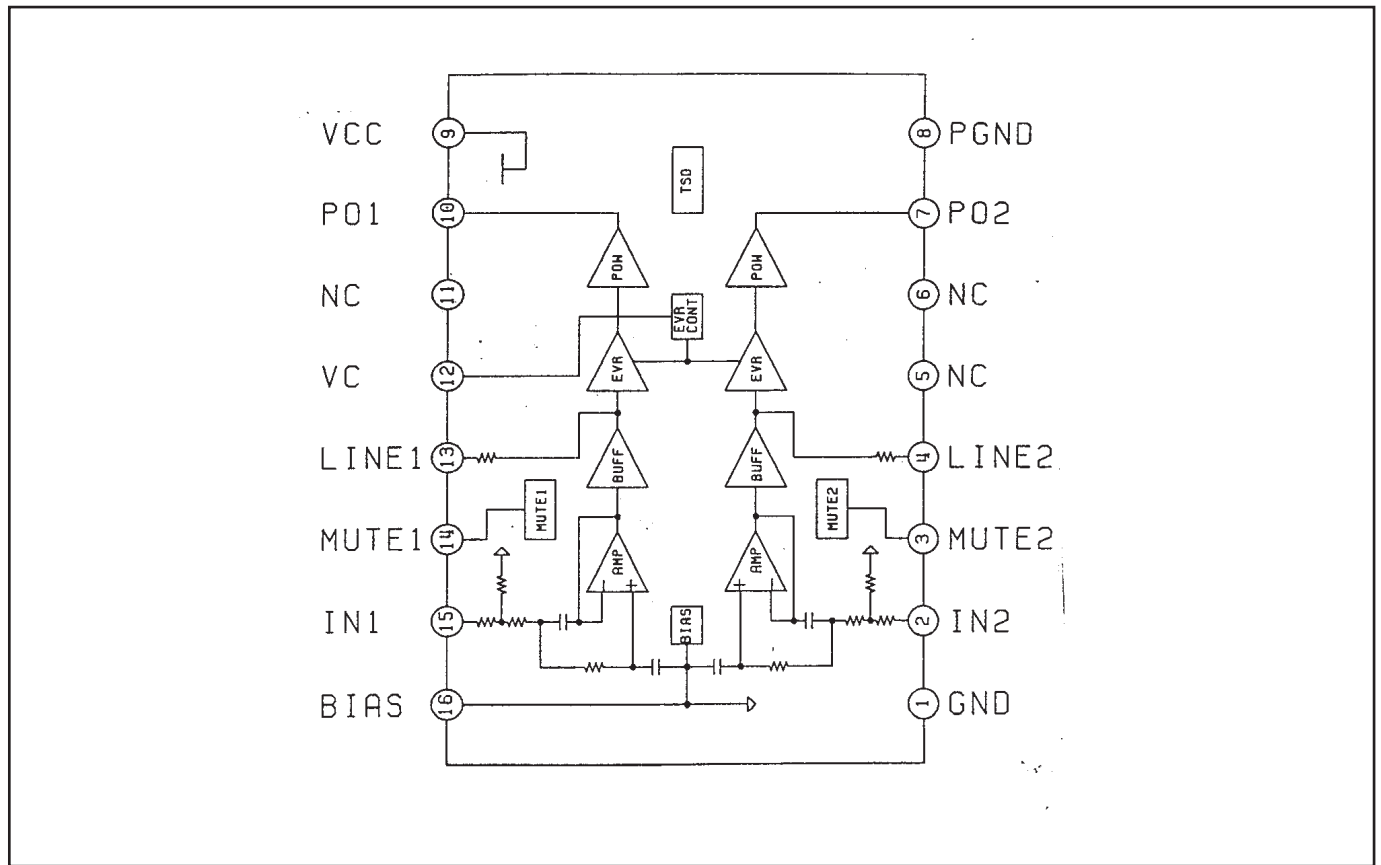
### ● AD8183ARU/AD8185ARU <Selector, IC101, IC201, IC5203>



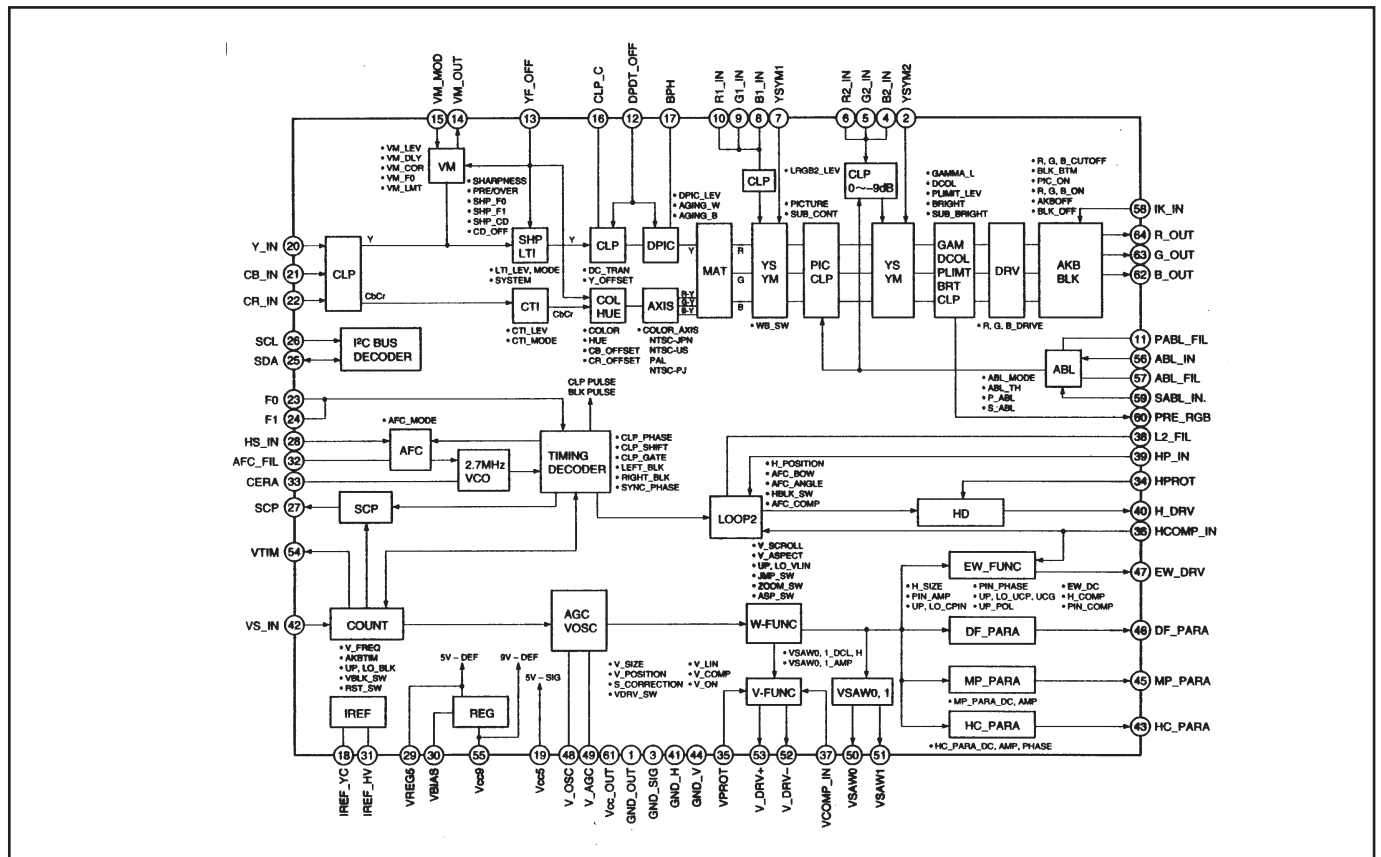
### ● BA7078AF <Sync Detector, IC7141>



# ● BH3540 <Volume Control, IC1652>



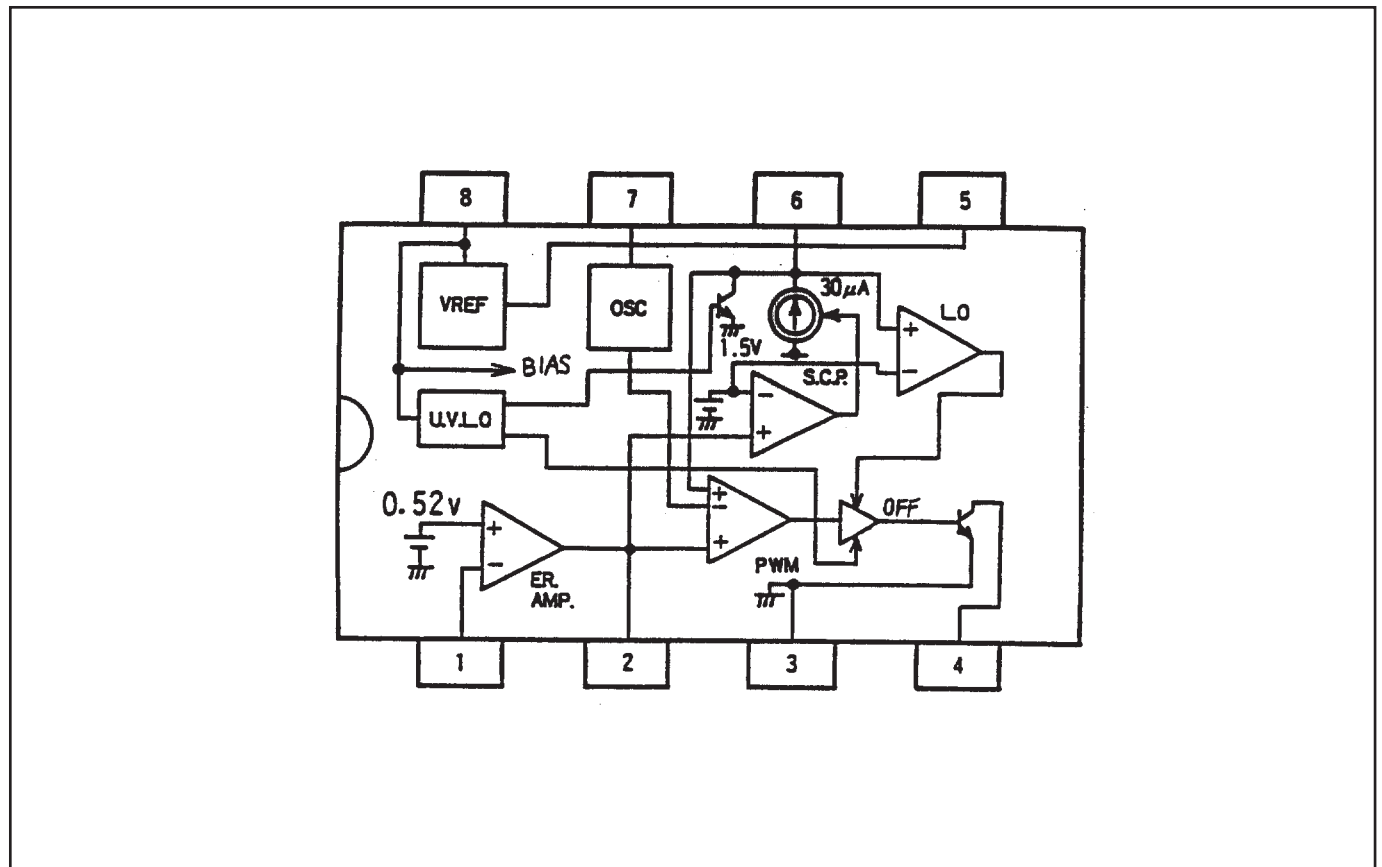
# ● CXA2150 <RGB Matrix, IC4501>



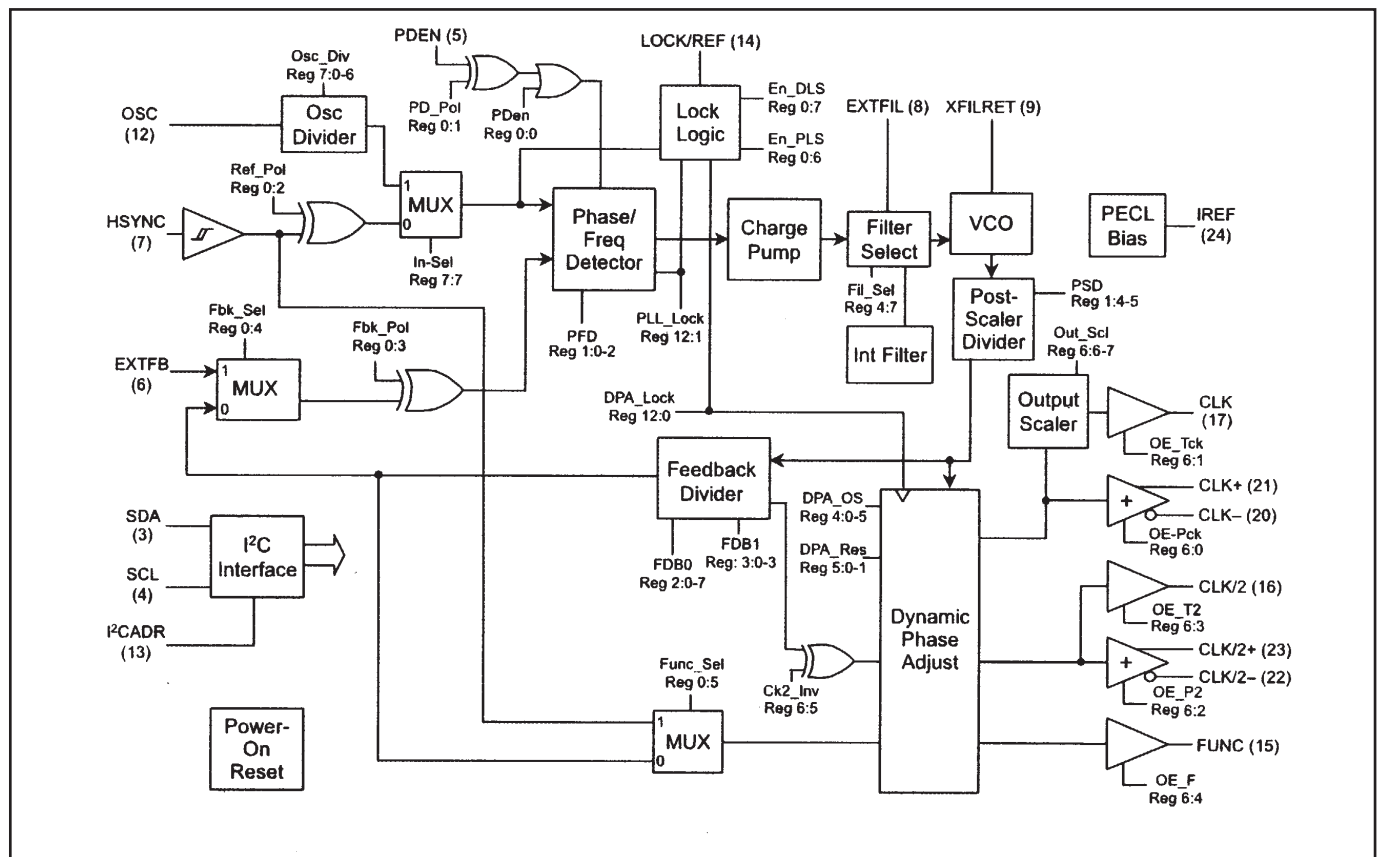




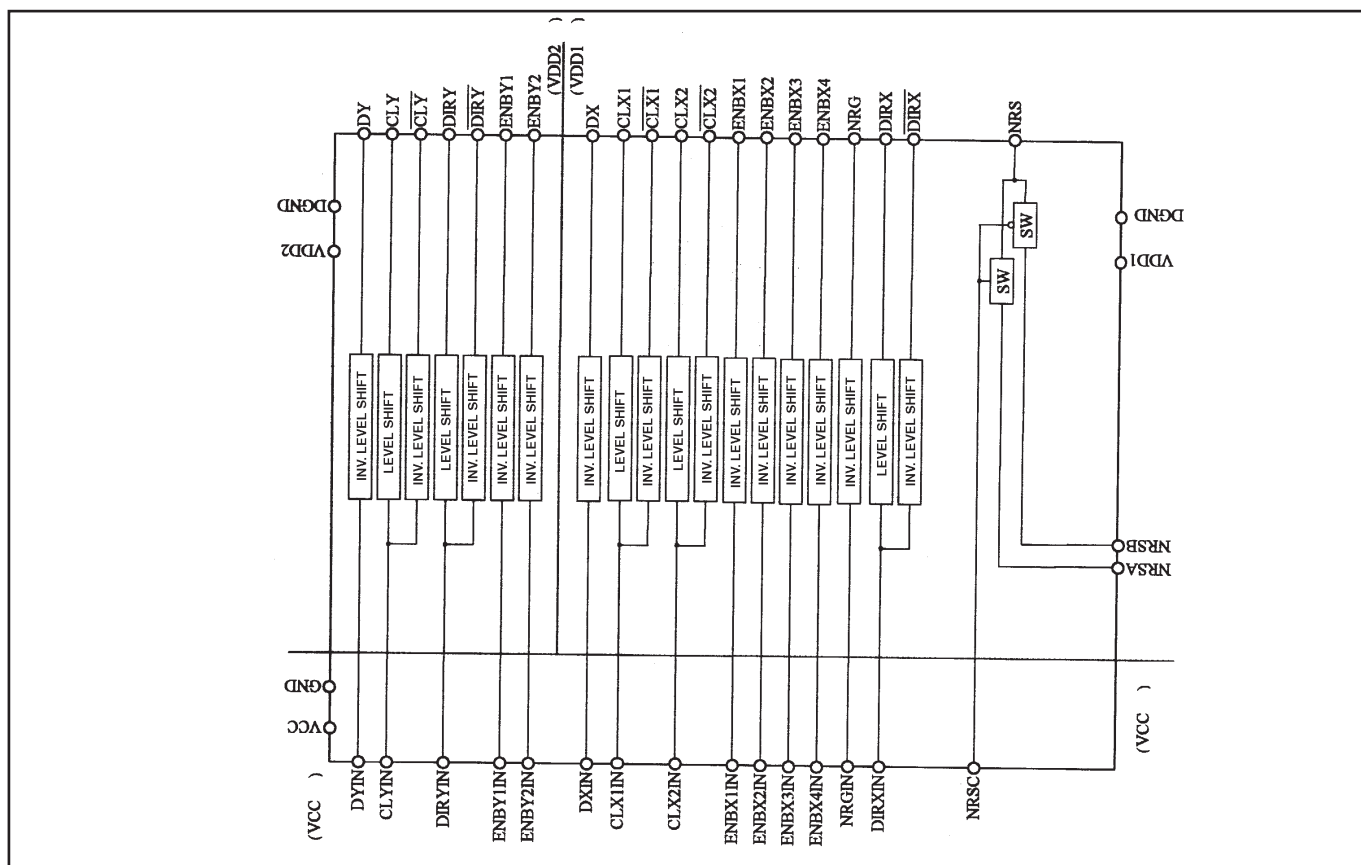
# **● FA7612CA <PWC Controller, IC6602, IC6603, IC6616>**



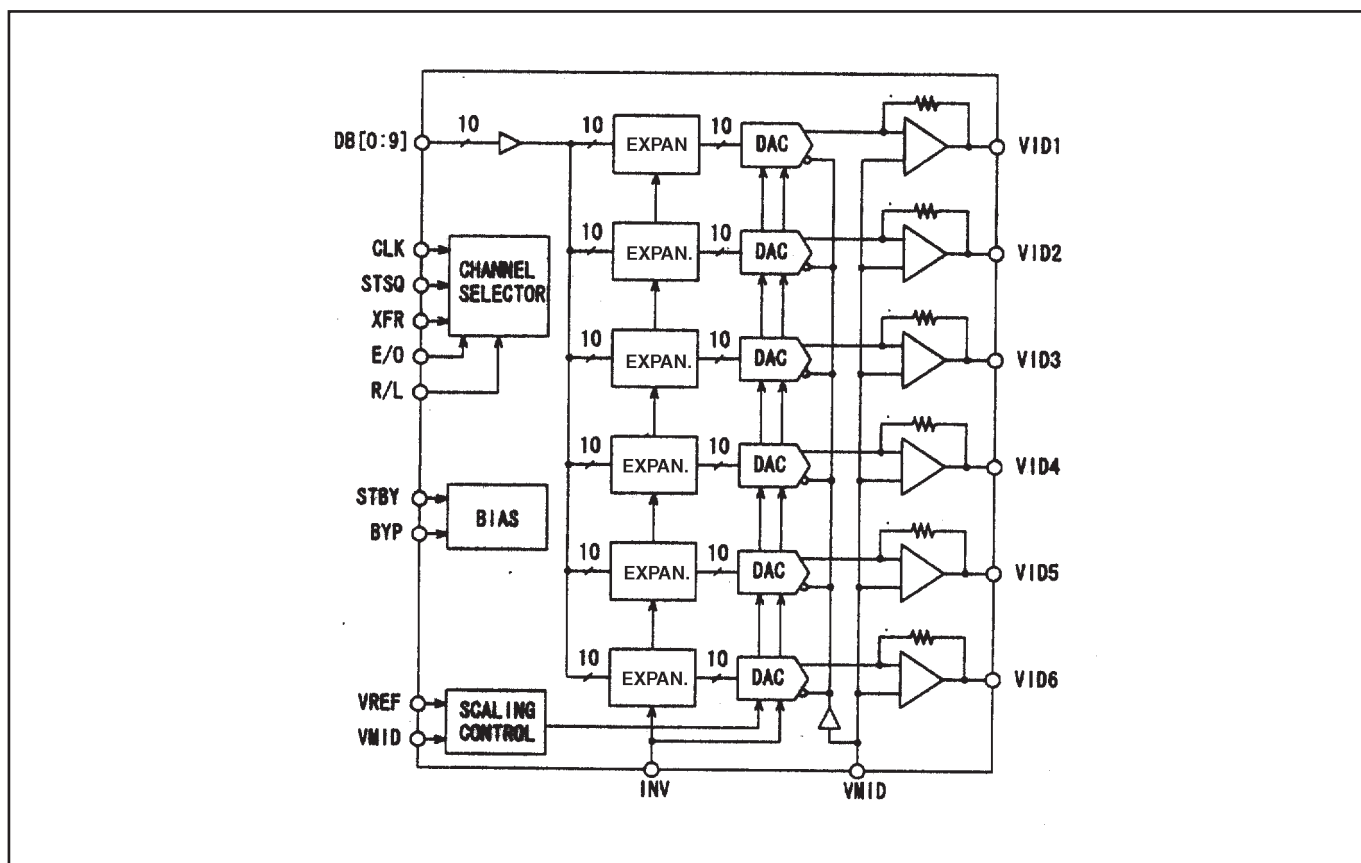
# **● ICS1523M <Clock Driver, IC4231>**



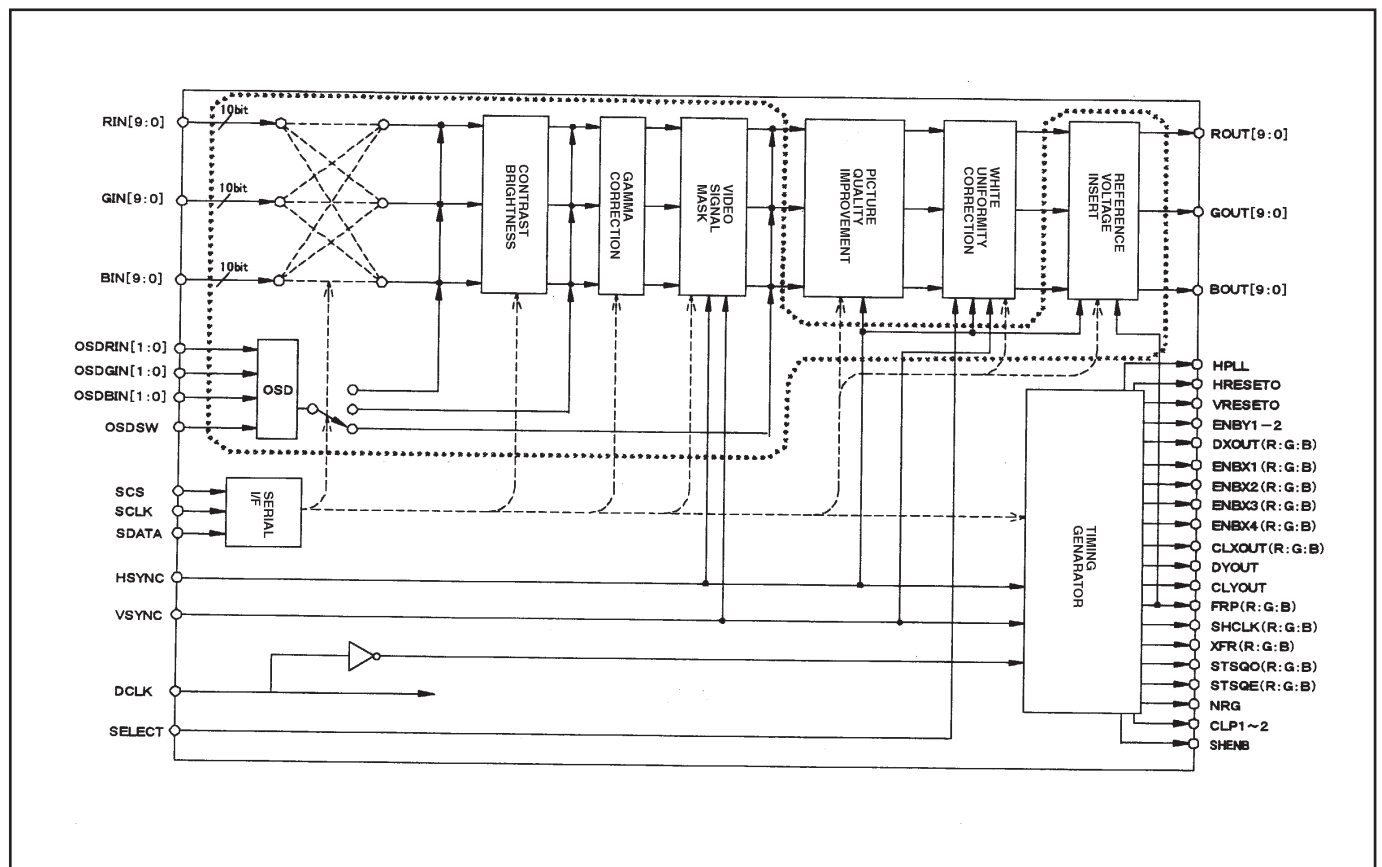
### ● L3E01031 <Level Shift, IC3611, IC3631, IC36651>



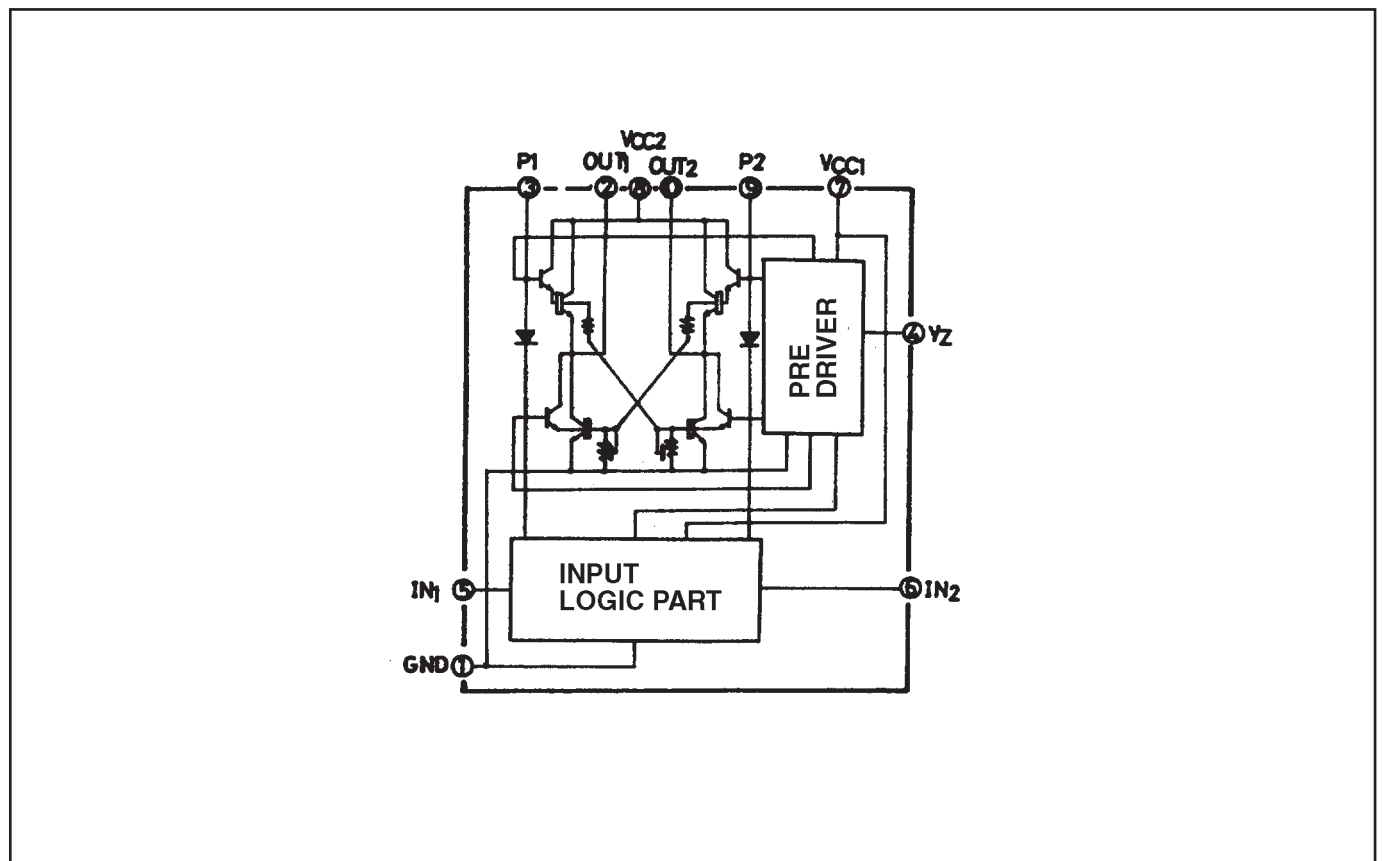
### ● L3E06070 <D/A-Sample & Hold, IC501, IC531, IC561, IC1501, IC1531, IC1561>



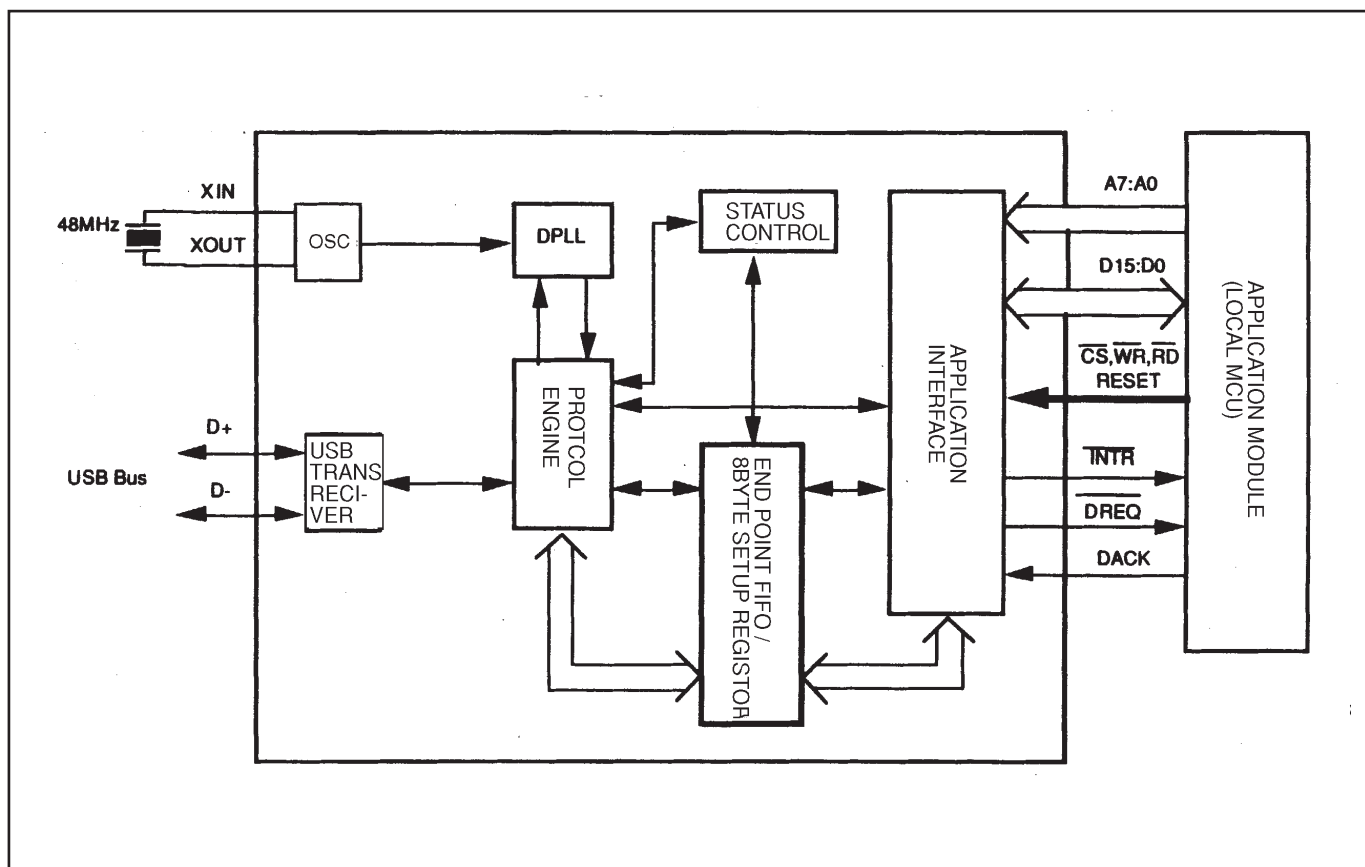
# ● L3E07050 <Color, Gamma Correction & Timing Controller , IC401>



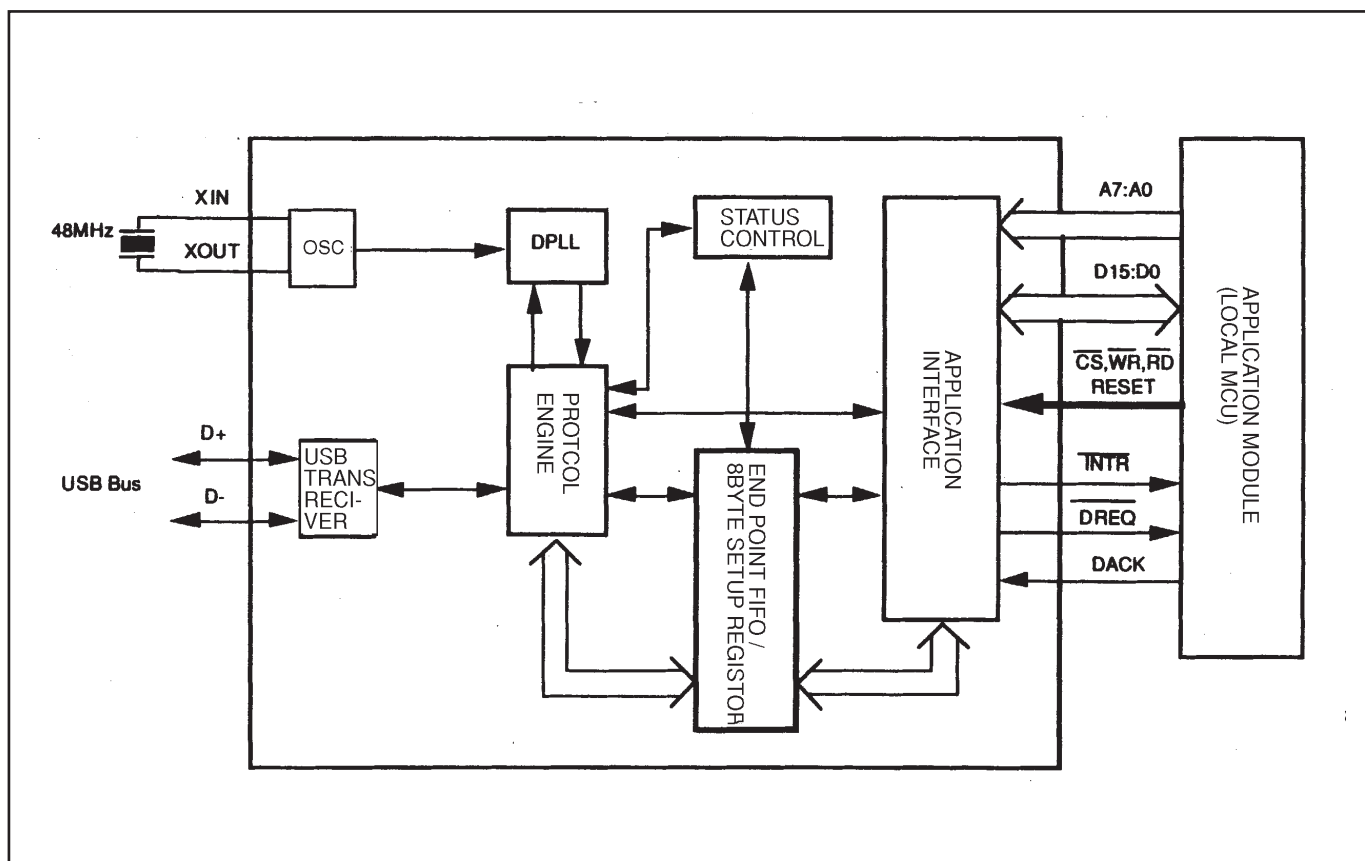
# ● LB1645 <Motor Drive, IC1601>



● LB1641 <Motor Drive, IC1602, IC1611>

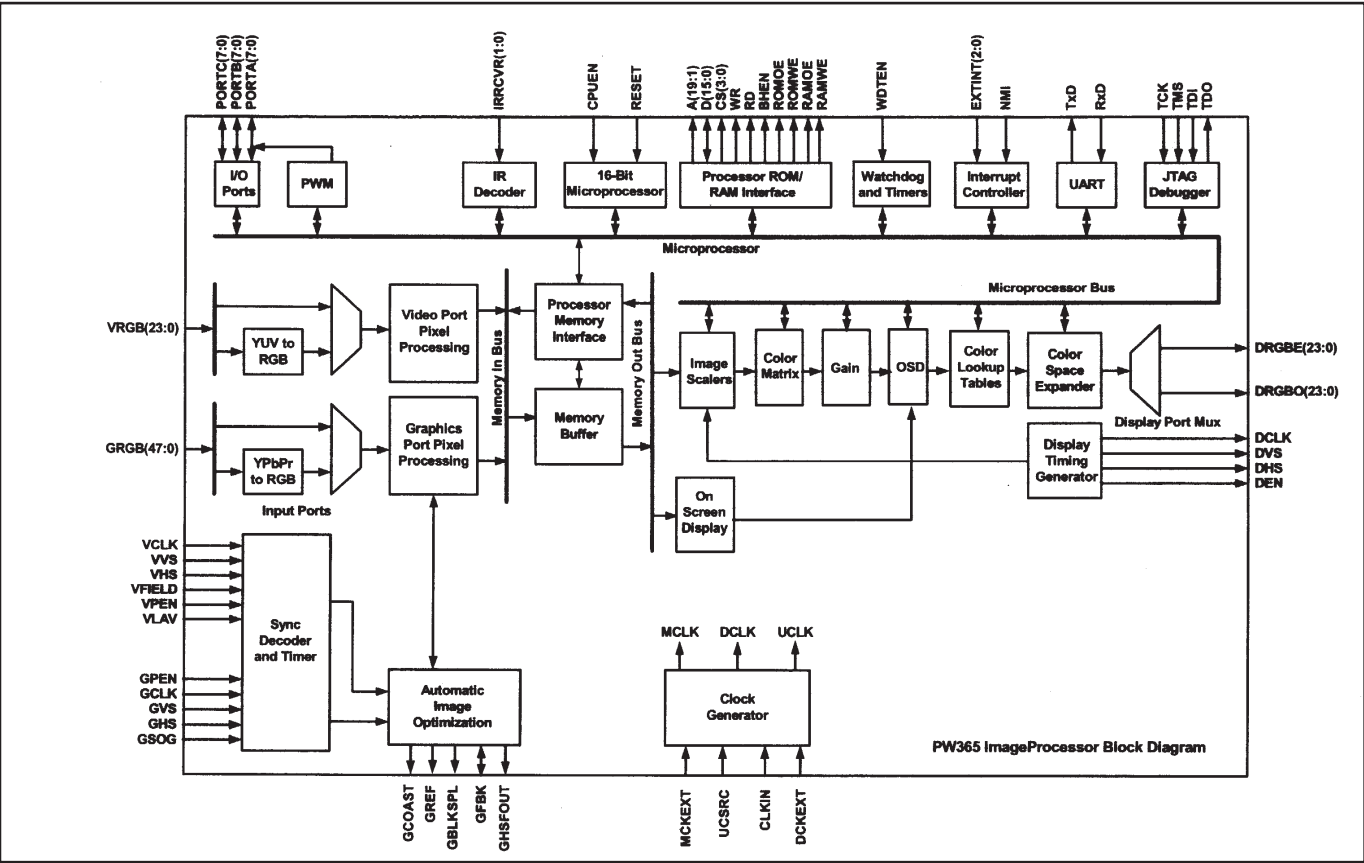


● ML60851 <USB I/F, IC9801>

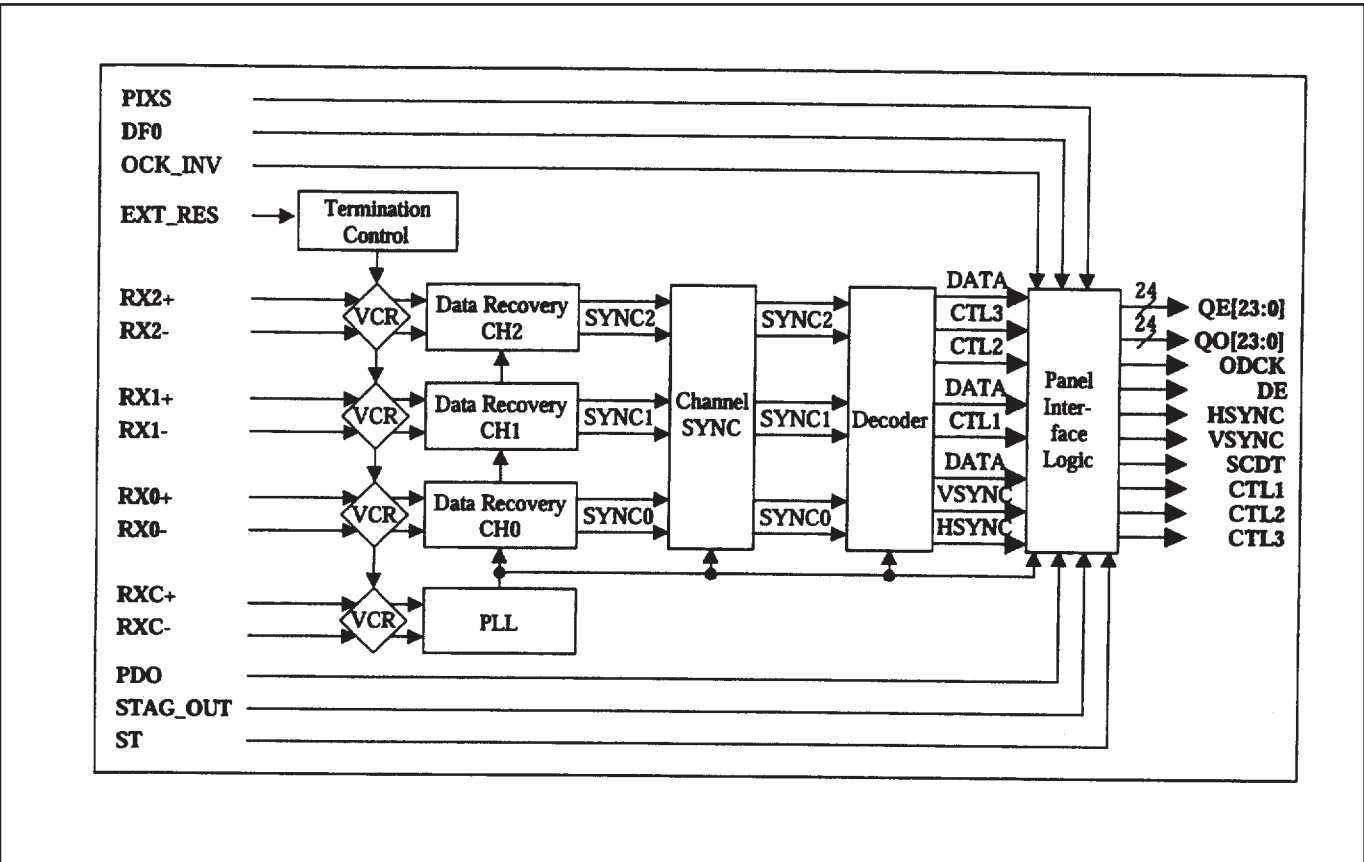




● PW365 <System Control & Scan Converter, IC301>

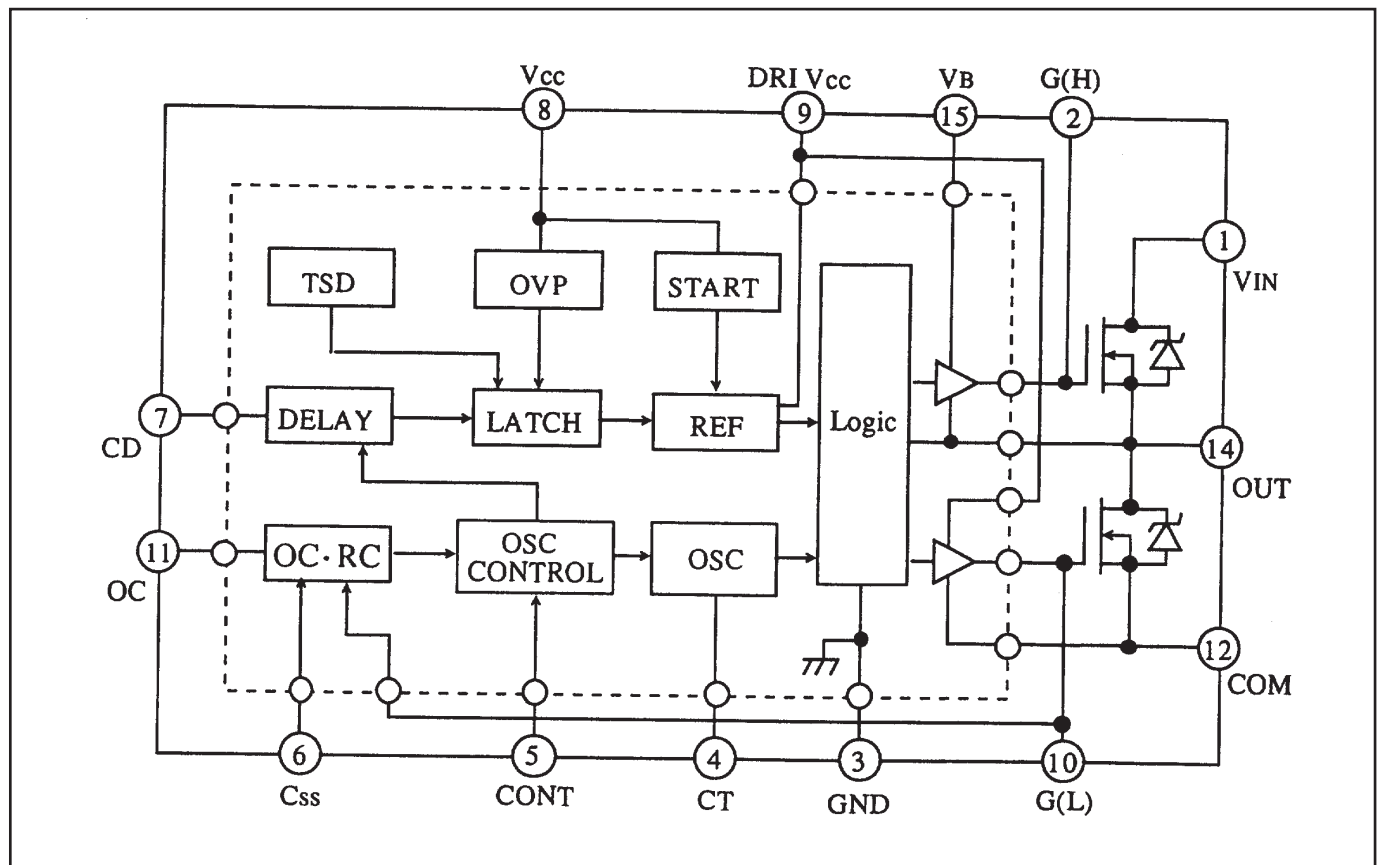


● SII161ACT <DVI I/F, IC8001>

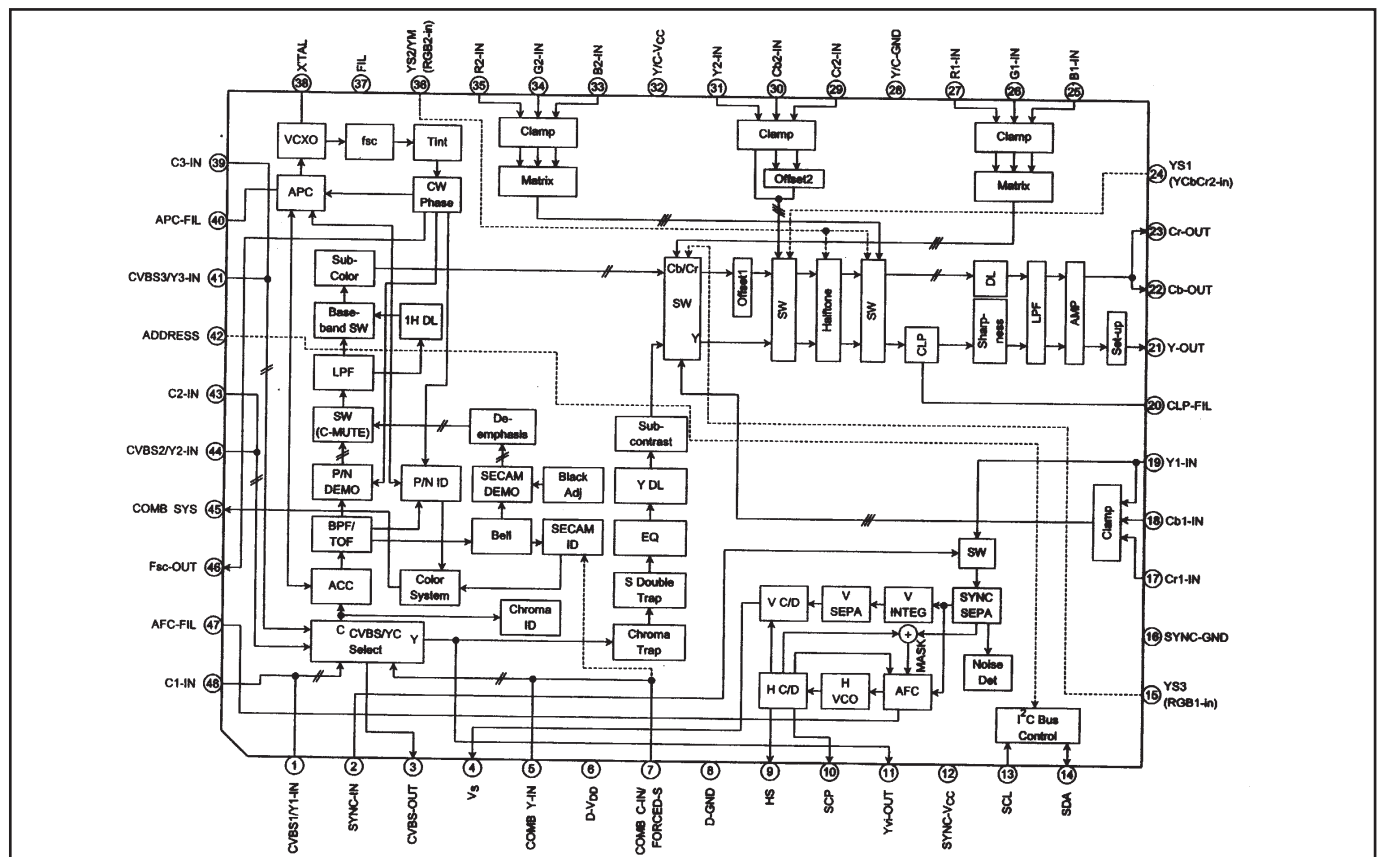




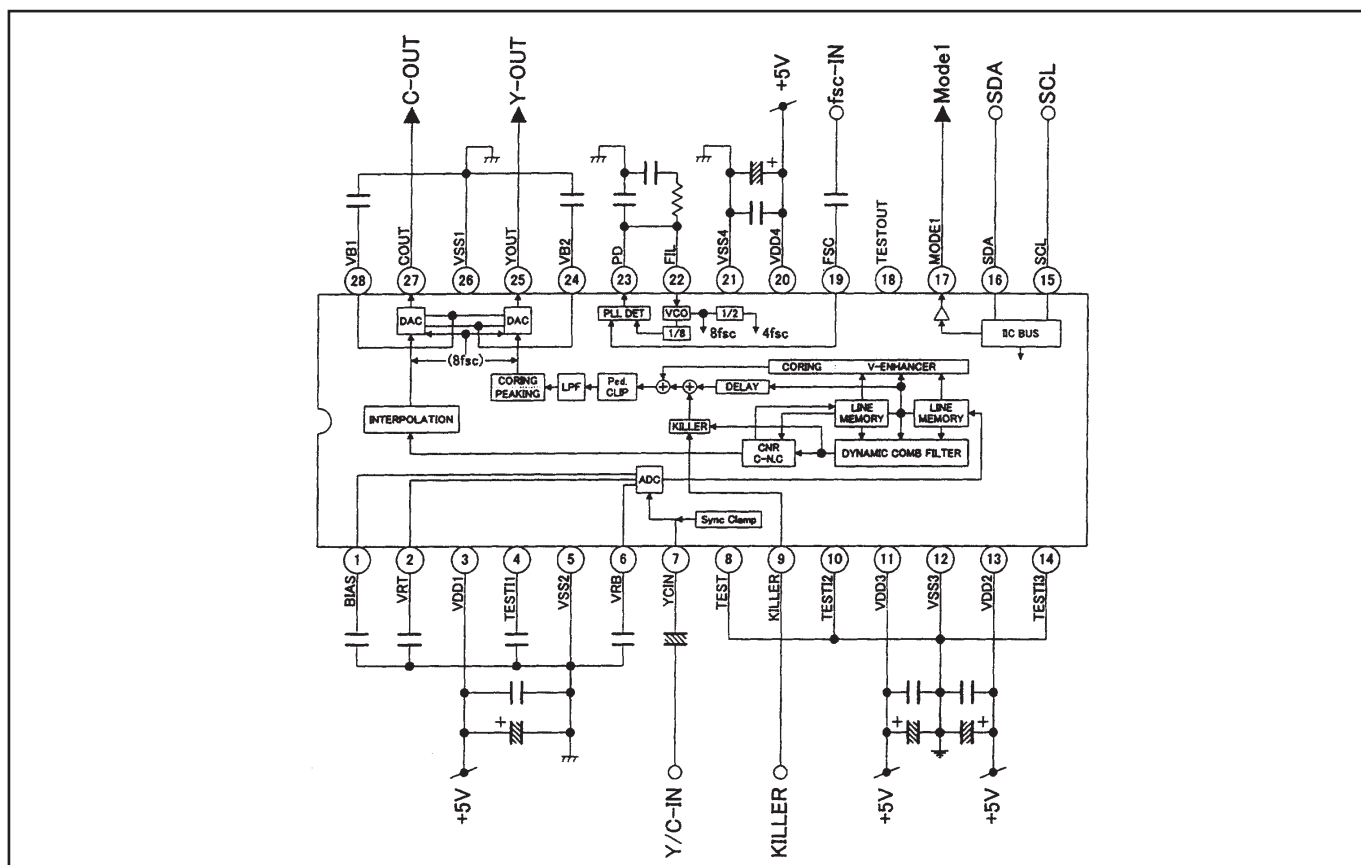
## ● STR-Z2156 <Power Switching, IC651>



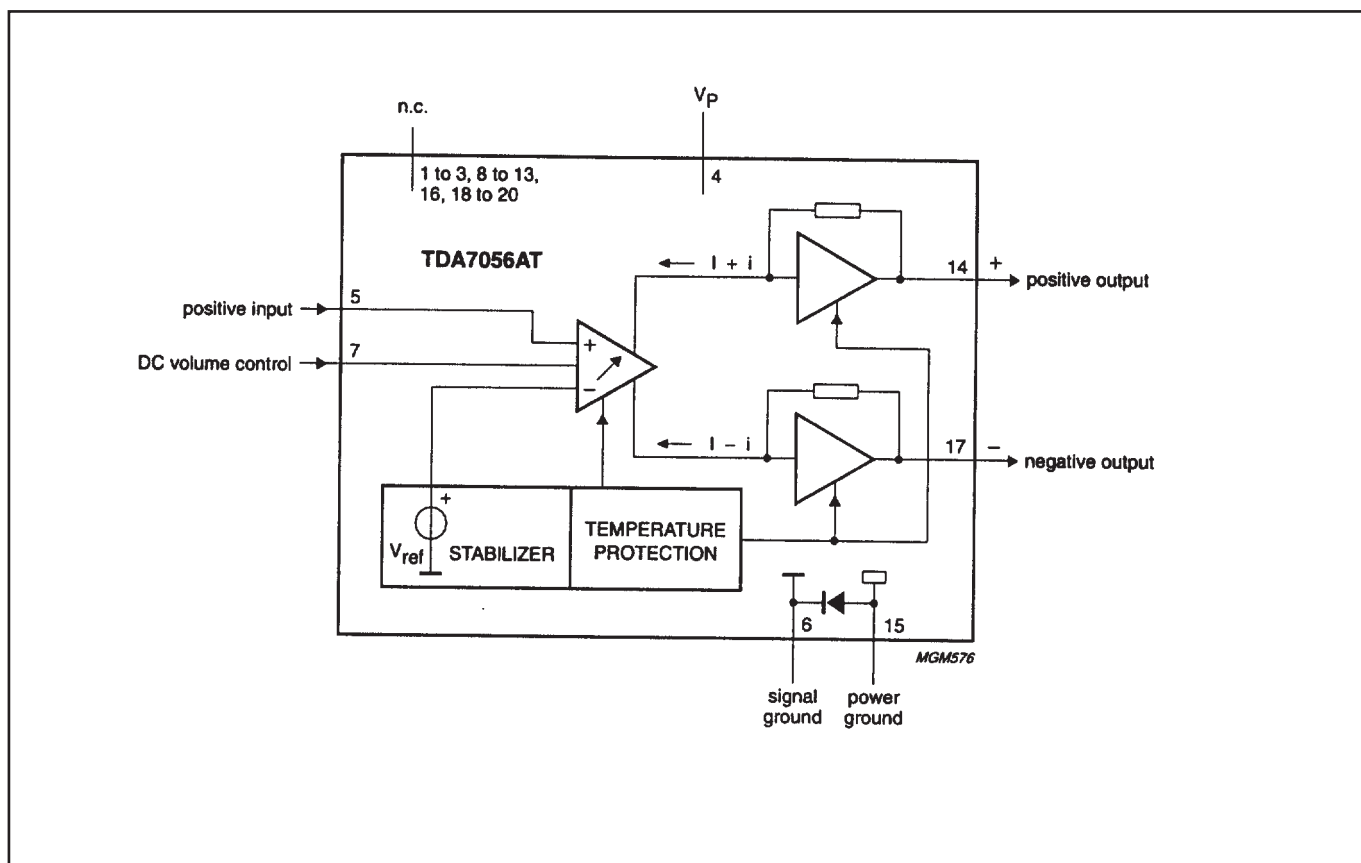
## ● TB1274AF <Video Decoder, IC3101>



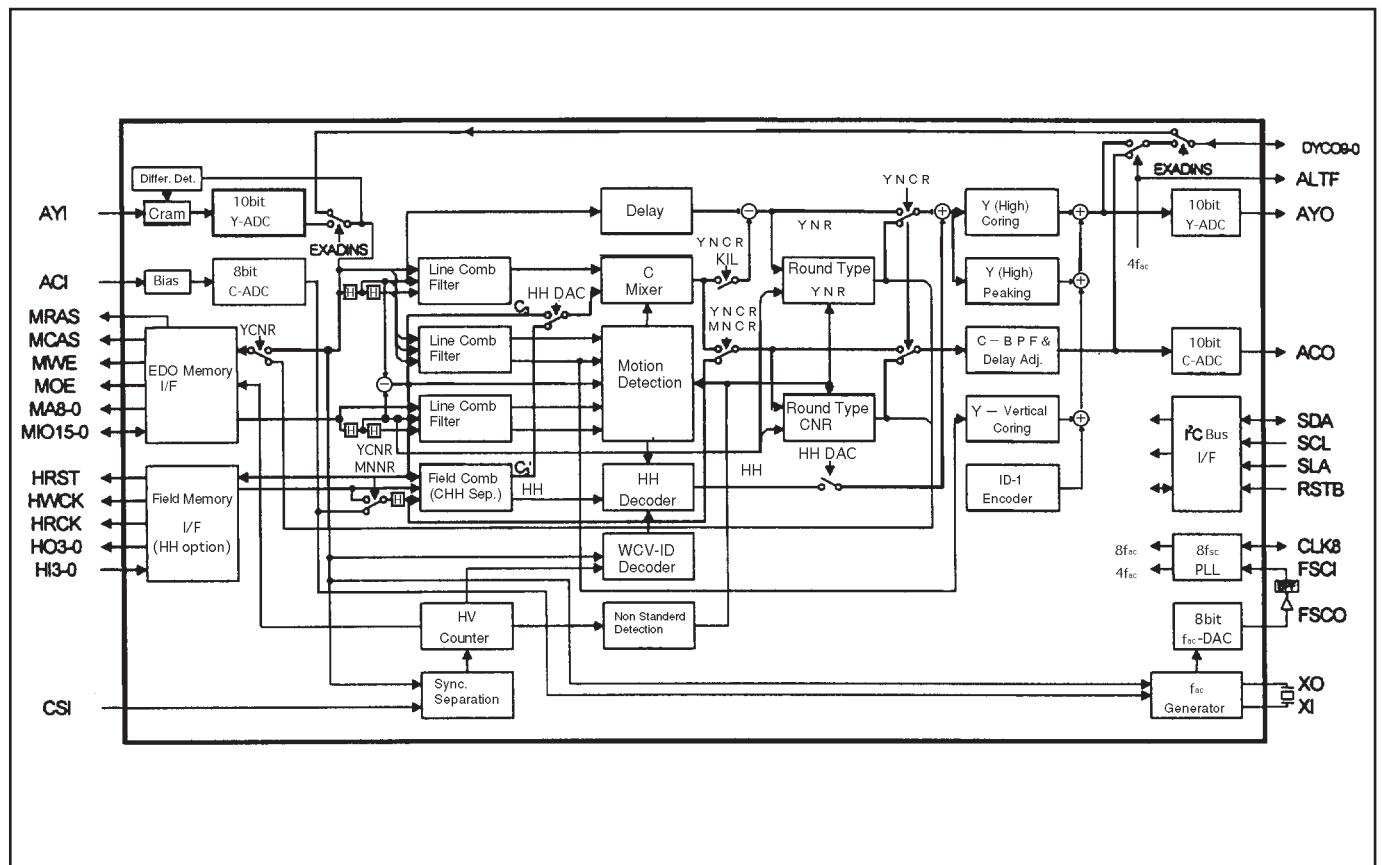
# ● TC90A69F<Digital Comb Filter, IC2101>



# ● TDA7056 <Audio Output, IC1631, IC1632>



## ● uPD64083 <3D Y/C Separation, IC1101>



Product safety should be considered when a component replacement is made in any area of a projector. Components indicated by a  $\Delta$  mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

## ● Read Description in the parts list

Read description in the Capacitor and Resistor as follows:

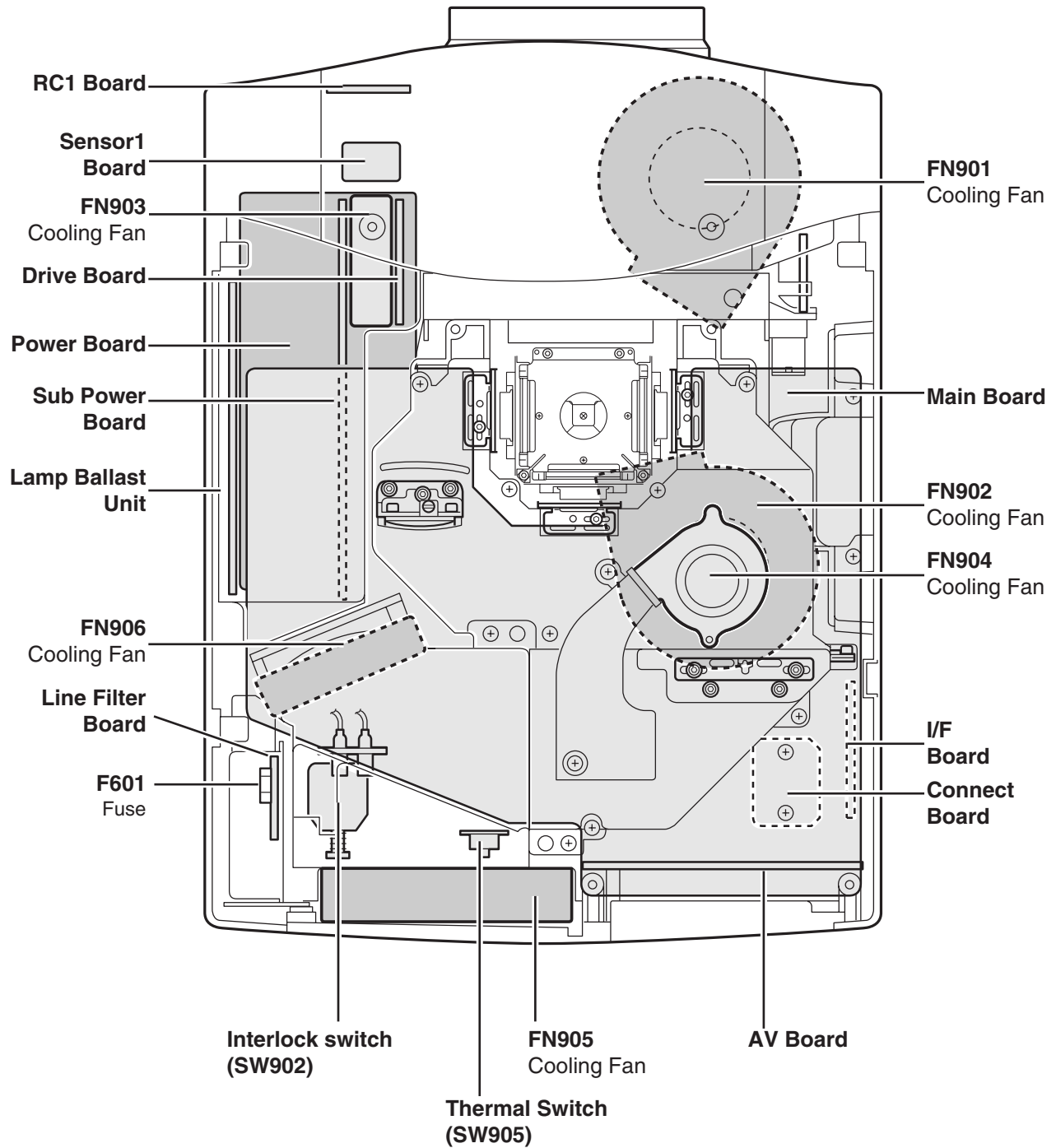
CAPACITOR	CERAMIC	100P	K	50V	
					Rated Voltage
					Tolerance Symbols:
					Less than 10pF
					A : Not specified B : $\pm 0.1\text{pF}$ C : $\pm 0.25\text{pF}$
					D : $\pm 0.5\text{pF}$ E : $+0 -1\text{pF}$ F : $\pm 1\text{PF}$
					G : $\pm 2\text{pF}$ H : $+0.1 -0\text{pF}$ L : $+0 -0.1\text{pF}$
					R : $\pm 0.25 -0\text{pF}$ S : $+0 -0.25\text{pF}$
					More than 10pF
					A : Not specified B : $\pm 0.1\%$ C : $\pm 0.25\%$
					D : $\pm 0.5\%$ F : $\pm 1\%$ G : $\pm 2\%$
					H : $\pm 3\%$ J : $\pm 5\%$ K : $\pm 10\%$
					L : $\pm 15\%$ M : $\pm 20\%$ N : $\pm 30\%$
					P : $+100 -0\%$ Q : $+30 -10\%$ T : $+50 -10\%$
					U : $+75 -10\%$ V : $+20 -10\%$ W : $+100 -10\%$
					X : $+40 -20\%$ Y : $+150 -10\%$ Z : $+80 -20\%$
					Rated value: P=pico farad, U=micro farad
					Material:
					CERAMIC..... Ceramic
					MT-PAPER..... Metallized Paper
					POLYESTER..... Polyester
					MT-POLYEST.....Metallized Polyester
					POLYPRO..... Polypropylene
					MT-POLYPRO.....Metallized Polypropylene
					COMPO FILM.....Composite film
					MT-COMPO.....Metallized Composite
					STYRENE.....Styrene
					TA-SOLID..... Tantalum Oxide Solid Electrolytic
					AL-SOLID..... Aluminium Solid Electrolytic
					ELECT.....Aluminum Foil Electrolytic
					NP-ELECT.....Non-polarised Electrolytic
					OS-SOLID..... Aluminium Solid with Organic Semiconductive Electrolytic
					POS-SOLID..... Polymerized Organic Semiconductive
					DL-ELECT..... Double Layered Electrolytic
					PPS-FILM.....Polyphenylene Sulfide Film
					MT-PPS-FILM.....Metalized Polyphenylene Sulfide Film
					MT-PEN-FILM.....Metalized Polyethylenenaphthalate Film
					CAPACITOR.....Other

RESISTOR	CARBON	4.7K	J	A	1/4W	
						Rated Wattage
						Performance Symbols:
						A: General B: Non flammable Z: Low noise
						Other: Temperature coefficient
						T: $\pm 10\text{ppm}/^\circ\text{C}$ U: $\pm 25\text{ppm}/^\circ\text{C}$ C: $\pm 50\text{ppm}/^\circ\text{C}$
						D: $\pm 100\text{ppm}/^\circ\text{C}$ E: $\pm 200\text{ppm}/^\circ\text{C}$ F: $\pm 250\text{ppm}/^\circ\text{C}$
						G: $\pm 350\text{ppm}/^\circ\text{C}$ H: $\pm 1000\text{ppm}/^\circ\text{C}\pm 10\%$ W: $\pm 1200\text{ppm}/^\circ\text{C}\pm 10\%$
						Y: $\pm 1400\text{ppm}/^\circ\text{C}\pm 10\%$ J: $\pm 2000\text{ppm}/^\circ\text{C}\pm 10\%$ K: $\pm 2400\text{ppm}/^\circ\text{C}\pm 10\%$
						L: $\pm 2700\text{ppm}/^\circ\text{C}\pm 10\%$ M: $\pm 3000\text{ppm}/^\circ\text{C}\pm 10\%$ N: $\pm 3300\text{ppm}/^\circ\text{C}\pm 10\%$
						P: $\pm 3600\text{ppm}/^\circ\text{C}\pm 10\%$ Q: $\pm 3900\text{ppm}/^\circ\text{C}\pm 10\%$ R: $\pm 4200\text{ppm}/^\circ\text{C}\pm 10\%$
						S: $\pm 4300\text{ppm}/^\circ\text{C}\pm 10\%$ V: $\pm 4500\text{ppm}/^\circ\text{C}\pm 10\%$ X: $\pm 8000\text{ppm}/^\circ\text{C}\pm 10\%$
						Tolerance Symbols:
						A: $\pm 0.05\%$ B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$
						F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$
						M: $\pm 20\%$ P: $\pm 5 -15\%$ Z: 0 ohm
						Rated value, ohms:
						K: 1,000, M: 1,000,000
						Material:
						CARBON..... Carbon
						MT-FILM..... Metal Film
						OXIDE-MT..... Oxide Metal Film
						SOLID..... Composition
						MT-GLAZE..... Metal Glaze
						WIRE WOUND...Wire Wound
						CERAMIC RES.. Ceramic
						FUSIBLE RES....Fusible
						RESISTOR .....Other

## Electrical Parts List

Note: Parts order must contain Chassis No., Part No., and Descriptions.

● OUT OF CIRCUIT BOARD



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
<b>ASSEMBLED BOARDS</b>			R6897	401 105 1501	MT-GLAZE 1.5K JA 1/16W
			R6898	401 105 5202	MT-GLAZE 470 JA 1/16W
△ 610 293 1815	ASSY,PWB,CONTROL MA8A	1AA0B10C3390A	<b>DIODE</b>		
△ 610 293 1839	ASSY,PWB,RC FRONT MA8A	1AA0B10C3390C	D6871	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
△ 610 293 1846	ASSY,PWB,CONNECT MA8A	1AA0B10C3390D	D6872	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
△ 610 294 8233	ASSY,PWB,SENSOR 1 MA8A	1AA0B10C3390E	D6881	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
△ 610 297 5154	ASSY,PWB,MAIN M4LA	1AA0B10C37400	D6891	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
△ 610 298 5344	ASSY,PWB,POWER M4LA	1AA0B10C3750A	D6892	407 203 7803	LED SML-210LT T86 M
△ 610 298 5351	ASSY,PWB,SUB POWER M4LA	1AA0B10C3750B	D6893	407 203 7902	LED SML-210MT T86 M
△ 610 298 5368	ASSY,PWB,DRIVE M4LA	1AA0B10C3750C	D6894	407 203 7803	LED SML-210LT T86 M
△ 610 298 5375	ASSY,PWB,FILTER M4LA	1AA0B10C3750D	D6895	407 203 7704	LED SML-210DT T86 L
△ 610 298 9380	ASSY,PWB,A/V M4LA	1AA0B10C3810A	<b>MISCELLANEOUS</b>		
△ 610 298 9397	ASSY,PWB,I/F M4L	1AA0B10C3810B	SW6871	645 026 2791	SWITCH,PUSH 1P-1TX1
<b>OUT OF CIRCUIT BOARDS</b>			SW6872	645 026 2791	SWITCH,PUSH 1P-1TX1
△ LF901	645 045 2154	UNIT,NOISE FILTER	SW6873	645 026 2791	SWITCH,PUSH 1P-1TX1
△ LP900	610 293 5868	COMPL,OPTICAL LAMP-MA8A	SW6874	645 026 2791	SWITCH,PUSH 1P-1TX1
L901	645 003 3834	CORE,FERRITE	SW6875	645 026 2791	SWITCH,PUSH 1P-1TX1
L902	645 003 3834	CORE,FERRITE	SW6876	645 026 2791	SWITCH,PUSH 1P-1TX1
<b>MISCELLANEOUS</b>			SW6878	645 026 2791	SWITCH,PUSH 1P-1TX1
△ A901	645 047 1346	UNIT,BALLAST	SW6887	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN901	645 047 9700	MOTOR,FAN DC 11W	SW6888	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN902	645 047 9700	MOTOR,FAN DC 11W	SW6891	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN903	645 047 9274	MOTOR,FAN DC 1.68W	SW6892	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN904	645 047 9274	MOTOR,FAN DC 1.68W	SW6897	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN905	645 047 9489	MOTOR,FAN DC 5.28W	SW6898	645 026 2791	SWITCH,PUSH 1P-1TX1
△ FN906	645 048 4001	MOTOR,FAN DC 2.4W	<b>RC FRONT BOARD</b>		
SP901	645 047 7584	SPEAKER, 8	<b>610 293 1839 ASSY,PWB,RC FRONT MA8A</b>		
SP902	645 047 7584	SPEAKER, 8	<b>1AA0B10C3390C</b>		
△ SW902	645 031 7743	SWITCH,PUSH 2P-2TX2	<b>CAPACITOR</b>		
△ SW905	645 050 3580	SWITCH,THERMAL	C2801	403 283 6309	CERAMIC 1U Z 10V
<b>CONTROL BOARD</b>			C2802	403 157 6206	CERAMIC 220P K 50V
<b>610 293 1815 ASSY,PWB,CONTROL MA8A</b>			C2803	403 304 2105	ELECT 47U M 6.3V
<b>1AA0B10C3390A</b>			<b>RESISTOR</b>		
<b>CAPACITOR</b>			R2801	401 105 0405	MT-GLAZE 100 JA 1/16W
C6871	403 164 0204	CERAMIC 0.1U Z 25V	R2802	401 105 0405	MT-GLAZE 100 JA 1/16W
C6881	403 164 0204	CERAMIC 0.1U Z 25V	R2803	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
C6891	403 164 0204	CERAMIC 0.1U Z 25V	<b>MISCELLANEOUS</b>		
C6892	403 164 0204	CERAMIC 0.1U Z 25V	AU2801	645 034 5029	UNIT,REMOCON RECEIVER
<b>RESISTOR</b>			<b>CONNECT BOARD</b>		
R6871	401 105 2904	MT-GLAZE 22K JA 1/16W	<b>610 293 1846 ASSY,PWB,CONNECT MA8A</b>		
R6872	401 105 1600	MT-GLAZE 15K JA 1/16W	<b>1AA0B10C3390D</b>		
R6873	401 105 6001	MT-GLAZE 5.6K JA 1/16W	<b>SENSOR 1 BOARD</b>		
R6874	401 105 5301	MT-GLAZE 4.7K JA 1/16W	<b>610 294 8233 ASSY,PWB,SENSOR 1 MA8A</b>		
R6875	401 105 3307	MT-GLAZE 2.7K JA 1/16W	<b>1AA0B10C3390E</b>		
R6876	401 105 4106	MT-GLAZE 3.3K JA 1/16W	<b>INTEGRATED CIRCUIT</b>		
R6878	401 105 5202	MT-GLAZE 470 JA 1/16W	IC1691	409 481 8602	IC LM76CHMX-5
R6887	401 105 1501	MT-GLAZE 1.5K JA 1/16W	<b>CAPACITOR</b>		
R6888	401 105 5202	MT-GLAZE 470 JA 1/16W	C1691	403 281 5205	CERAMIC 0.22U Z 16V
R6891	401 105 2904	MT-GLAZE 22K JA 1/16W			
R6892	401 105 3802	MT-GLAZE 30K JA 1/16W			
R6893	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6894	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6895	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6896	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C1692	403 155 1609	CERAMIC 33P J 50V	Q4509	405 014 4509	TR 2SC2412K T146 R
C1693	403 155 1609	CERAMIC 33P J 50V	Q4511	405 134 5905	TR 2SA1037AK-T146-R
<b>RESISTOR</b>			Q4512	405 014 4509	TR 2SC2412K T146 R
R1691	401 105 0405	MT-GLAZE 100 JA 1/16W	Q4551	405 134 5905	TR 2SA1037AK-T146-R
R1692	401 105 0306	MT-GLAZE 10 JA 1/16W	Q4552	405 134 5905	TR 2SA1037AK-T146-R
R1693	401 105 0306	MT-GLAZE 10 JA 1/16W	Q4553	405 134 5905	TR 2SA1037AK-T146-R
<b>CONNECT BOARD</b>			Q4554	405 014 4509	TR 2SC2412K T146 R
<b>610 297 5154 ASSY,PWB,MAIN M4LA</b>			Q4556	405 014 4509	TR 2SC2412K T146 R
<b>1AA0B10C37400</b>			Q4557	405 014 4509	TR 2SC2412K T146 R
<b>TRANSISTOR</b>			Q4801	405 134 5905	TR 2SA1037AK-T146-R
Q1101	405 134 5905	TR 2SA1037AK-T146-R	Q4802	405 134 5905	TR 2SA1037AK-T146-R
Q1141	405 134 5905	TR 2SA1037AK-T146-R	Q4803	405 134 5905	TR 2SA1037AK-T146-R
Q1142	405 134 5905	TR 2SA1037AK-T146-R	Q4804	405 134 5905	TR 2SA1037AK-T146-R
Q1143	405 014 4509	TR 2SC2412K T146 R	Q4805	405 014 4509	TR 2SC2412K T146 R
Q1144	405 134 5905	TR 2SA1037AK-T146-R	Q4807	405 014 4509	TR 2SC2412K T146 R
Q1145	405 014 4509	TR 2SC2412K T146 R	Q9801	405 134 5905	TR 2SA1037AK-T146-R
Q1146	405 134 5905	TR 2SA1037AK-T146-R	Q9802	405 014 4509	TR 2SC2412K T146 R
Q1147	405 134 5905	TR 2SA1037AK-T146-R	<b>INTEGRATED CIRCUIT</b>		
Q1148	405 134 5905	TR 2SA1037AK-T146-R	IC1101	409 515 9803	IC UPD64083GF-3BA
Q1149	405 014 4509	TR 2SC2412K T146 R	IC1102	409 416 6406	IC BA033FP-E2
Q1151	405 134 5905	TR 2SA1037AK-T146-R		409 410 1001	IC UPC2933T-E1
Q1161	405 134 5905	TR 2SA1037AK-T146-R	IC1141	409 051 2900	IC TC4053BF(EL)
Q1163	405 134 5905	TR 2SA1037AK-T146-R	IC1161	409 499 1701	IC PQ025EZ01ZP
Q141	405 014 4509	TR 2SC2412K T146 R		409 461 7700	IC PQ2TZ15
Q142	405 014 4509	TR 2SC2412K T146 R	IC141	410 300 4804	IC MM1031XM
Q143	405 014 4509	TR 2SC2412K T146 R	IC1501	409 502 3302	IC L3E06070D0A
Q144	405 134 5905	TR 2SA1037AK-T146-R	IC1531	409 502 3302	IC L3E06070D0A
Q145	405 014 4509	TR 2SC2412K T146 R	IC1561	409 502 3302	IC L3E06070D0A
Q146	405 014 4509	TR 2SC2412K T146 R	IC1801	409 475 3705	IC M66500FP
Q147	405 014 4509	TR 2SC2412K T146 R	IC1802	410 364 6905	IC TC74ACT138FT-EL
Q148	405 134 5905	TR 2SA1037AK-T146-R	IC1871	409 481 8602	IC LM76CHMX-5
Q149	405 014 4509	TR 2SC2412K T146 R	IC1872	409 481 8602	IC LM76CHMX-5
Q2101	405 014 4509	TR 2SC2412K T146 R	IC201	409 470 2604	IC AD8183ARU
Q2102	405 014 4509	TR 2SC2412K T146 R	IC2101	409 504 5007	IC TC90A69F
Q2361	405 014 4509	TR 2SC2412K T146 R	IC231	409 520 4305	IC AD9888KS-140
Q2501	405 014 4509	TR 2SC2412K T146 R	IC2311	410 429 8202	IC MB40C348VPFV
Q2511	405 014 4509	TR 2SC2412K T146 R	IC234	409 416 6406	IC BA033FP-E2
Q2521	405 014 4509	TR 2SC2412K T146 R		409 410 1001	IC UPC2933T-E1
Q3103	405 014 4509	TR 2SC2412K T146 R	IC2341	409 357 6602	IC LT1260CS
Q3111	405 134 5905	TR 2SA1037AK-T146-R	IC235	409 416 6406	IC BA033FP-E2
Q3112	405 134 5905	TR 2SA1037AK-T146-R		409 410 1001	IC UPC2933T-E1
Q3113	405 134 5905	TR 2SA1037AK-T146-R	IC2351	409 416 6406	IC BA033FP-E2
Q3116	405 014 4509	TR 2SC2412K T146 R		409 410 1001	IC UPC2933T-E1
Q3117	405 014 4509	TR 2SC2412K T146 R	IC2352	409 416 6406	IC BA033FP-E2
Q3118	405 014 4509	TR 2SC2412K T146 R		409 410 1001	IC UPC2933T-E1
Q3301	405 014 4509	TR 2SC2412K T146 R	IC2353	409 416 6406	IC BA033FP-E2
Q3302	405 014 4509	TR 2SC2412K T146 R		409 410 1001	IC UPC2933T-E1
Q3571	405 014 4509	TR 2SC2412K T146 R	IC236	409 416 6406	IC BA033FP-E2
Q3601	405 002 8304	TR 2SA1203-Y-TEI2L		409 410 1001	IC UPC2933T-E1
Q3602	405 014 4509	TR 2SC2412K T146 R	IC2381	409 506 0406	IC M62392FP
Q4056	405 134 5905	TR 2SA1037AK-T146-R	IC301	409 502 4903	IC PW365-20U
Q4061	405 134 5905	TR 2SA1037AK-T146-R	IC304	409 339 3605	IC 24LC16BT/SN-T
Q4062	405 134 5905	TR 2SA1037AK-T146-R	IC306	409 301 5309	IC TC7S32FU-TE85L
Q4063	405 134 5905	TR 2SA1037AK-T146-R	IC3101	409 504 9005	IC TB1274AF
Q4501	405 014 4509	TR 2SC2412K T146 R	IC3102	409 416 6505	IC BA05FP-E2
Q4502	405 014 4509	TR 2SC2412K T146 R	IC3103	409 416 6505	IC BA05FP-E2
Q4503	405 014 4509	TR 2SC2412K T146 R	IC3211	410 321 8300	IC TC74VCX16244FT
Q4504	405 014 4509	TR 2SC2412K T146 R	IC3212	410 321 8300	IC TC74VCX16244FT
Q4506	405 134 5905	TR 2SA1037AK-T146-R	IC3213	410 321 8300	IC TC74VCX16244FT
Q4507	405 014 4509	TR 2SC2412K T146 R	IC3214	410 362 6501	IC TC74LCX541FT
Q4508	405 134 5905	TR 2SA1037AK-T146-R	IC3224	410 362 6501	IC TC74LCX541FT
			IC3381	409 398 1901	IC L88MS05TL-TL
			IC341	410 352 8508	IC IDT71V016S15PHTR
				410 397 0406	IC IS61LV6416-15T
			IC3501	409 428 9600	IC M62399FP
			IC3502	409 431 2308	IC BA12FP-E2
			IC351	410 430 8208	IC MBM29LV800TA90B990



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
IC3551	409 428 9600	IC M62399FP		410 325 4704	IC HD74LVC244AT
IC361	409 501 9107	IC ICS512MT	IC813	409 152 5404	IC TC7S08F-TE85L
IC3611	409 502 3203	IC L3E01031F0A	IC814	410 362 6501	IC TC74LCX541FT
IC362	409 501 9107	IC ICS512MT	IC815	410 362 6501	IC TC74LCX541FT
IC3631	409 502 3203	IC L3E01031F0A	IC816	410 362 6600	IC TC74ACT541FT
IC3651	409 502 3203	IC L3E01031F0A	IC9401	409 511 2006	IC JS11110074
IC3671	409 390 0001	IC LM7171AIMX	IC9402	409 509 9109	IC W986432DH-7
	409 486 7709	IC LM7171BIMX	IC9451	410 325 4605	IC TC74LCX244FT
IC3681	409 343 0201	IC LT1206CS8		410 325 4704	IC HD74LVC244AT
IC391	409 416 6406	IC BA033FP-E2	IC9501	410 440 0407	IC XCS05XL-4VQ100C
	409 410 1001	IC UPC2933T-E1	IC9502	409 416 6406	IC BA033FP-E2
IC392	409 534 1703	IC SI-3025LSA-TL		409 410 1001	IC UPC2933T-E1
IC4001	409 490 8006	IC CXA2151Q	IC9551	409 534 1703	IC SI-3025LSA-TL
IC4002	409 416 6505	IC BA05FP-E2	IC9801	409 468 8908	IC ML60851CTB
IC401	409 502 3401	IC QL3E07050 K0A		409 521 4502	IC ML60851DTB
IC4021	409 431 6009	IC MC74VHC14DT	IC9821	410 311 5708	IC MC74HCT244ADT
	410 356 8009	IC SN74LV14APWR		410 315 5506	IC HD74HCT244TV
IC4201	410 426 8106	IC TC240C4FTB-C006 (O)	IC9822	409 327 6700	IC TC7W02FU-TE12L
IC4231	409 444 8700	IC ICS1523M-ER	<b>CAPACITOR</b>		
IC4251	410 401 7506	IC TC74VCX16374FT	C1101	403 164 0204	CERAMIC 0.1U Z 25V
IC4261	410 401 7506	IC TC74VCX16374FT	C1102	403 164 0204	CERAMIC 0.1U Z 25V
IC4271	410 401 7506	IC TC74VCX16374FT	C1103	403 164 0204	CERAMIC 0.1U Z 25V
IC4281	410 362 6501	IC TC74LCX541FT	C1105	403 321 2607	ELECT 10U M 16V
IC4291	409 534 1703	IC SI-3025LSA-TL	C1106	403 164 0204	CERAMIC 0.1U Z 25V
IC4501	409 495 4805	IC CXA2150AQ	C1107	403 164 0204	CERAMIC 0.1U Z 25V
IC4502	409 323 8906	IC TC4W53FU(TE12L)	C1108	403 164 0204	CERAMIC 0.1U Z 25V
IC4503	409 323 8906	IC TC4W53FU(TE12L)	C1109	403 164 0204	CERAMIC 0.1U Z 25V
IC4504	409 323 8906	IC TC4W53FU(TE12L)	C1111	403 321 2607	ELECT 10U M 16V
IC451	409 534 1703	IC SI-3025LSA-TL	C1112	403 164 0204	CERAMIC 0.1U Z 25V
IC4551	409 461 7304	IC AD8057ART	C1113	403 164 0204	CERAMIC 0.1U Z 25V
IC4552	409 461 7304	IC AD8057ART	C1114	403 164 0204	CERAMIC 0.1U Z 25V
IC4553	409 461 7304	IC AD8057ART	C1115	403 322 7809	ELECT 220U M 6.3V
IC4581	409 476 8600	IC NJM319M-TE2		403 349 4706	ELECT 220U M 6.3V
IC4702	409 431 6009	IC MC74VHC14DT	C1116	403 304 3102	ELECT 22U M 16V
	410 356 8009	IC SN74LV14APWR	C1117	403 164 0204	CERAMIC 0.1U Z 25V
IC4801	409 416 6406	IC BA033FP-E2	C1118	403 323 1301	CERAMIC 0.47U Z 10V
	409 410 1001	IC UPC2933T-E1	C1119	403 164 0204	CERAMIC 0.1U Z 25V
IC4811	410 325 4605	IC TC74LCX244FT	C1121	403 323 1301	CERAMIC 0.47U Z 10V
	410 325 4704	IC HD74LVC244AT	C1122	403 304 2105	ELECT 47U M 6.3V
IC4821	410 325 4605	IC TC74LCX244FT	C1123	403 145 9905	CERAMIC 22P J 50V
	410 325 4704	IC HD74LVC244AT	C1124	403 145 9905	CERAMIC 22P J 50V
IC4831	410 365 5600	IC SN74LVCC4245APWR	C1125	403 304 1801	ELECT 100U M 6.3V
IC4841	410 365 5600	IC SN74LVCC4245APWR		403 373 7704	ELECT 100U M 6.3V
IC4851	410 325 4605	IC TC74LCX244FT	C1126	403 164 0204	CERAMIC 0.1U Z 25V
	410 325 4704	IC HD74LVC244AT	C1127	403 155 1302	CERAMIC 150P J 50V
IC4861	410 325 4605	IC TC74LCX244FT	C1128	403 155 1302	CERAMIC 150P J 50V
	410 325 4704	IC HD74LVC244AT	C1129	403 283 2707	CERAMIC 0.01U K 16V
IC501	409 502 3302	IC L3E06070D0A	C1131	403 304 1801	ELECT 100U M 6.3V
IC531	409 502 3302	IC L3E06070D0A		403 373 7704	ELECT 100U M 6.3V
IC561	409 502 3302	IC L3E06070D0A	C1132	403 164 0204	CERAMIC 0.1U Z 25V
IC6301	410 365 4603	IC MS82V16520-8AGA	C1133	403 321 2607	ELECT 10U M 16V
IC6302	410 365 4603	IC MS82V16520-8AGA	C1134	403 164 0204	CERAMIC 0.1U Z 25V
IC6303	410 365 4603	IC MS82V16520-8AGA	C1135	403 322 7809	ELECT 220U M 6.3V
IC6304	410 365 4603	IC MS82V16520-8AGA		403 349 4706	ELECT 220U M 6.3V
IC8001	410 451 8805	IC SII161BCT100	C1136	403 322 7809	ELECT 220U M 6.3V
IC8003	409 051 2900	IC TC4053BF(EL)		403 349 4706	ELECT 220U M 6.3V
IC8004	409 487 5803	IC 24C01CT/SN	C1137	403 323 1301	CERAMIC 0.47U Z 10V
IC801	410 429 8301	IC HD64F7045F28-B983	C1141	403 164 0204	CERAMIC 0.1U Z 25V
IC802	409 344 1900	IC MN1382-Q-TX	C1142	403 149 9208	CERAMIC 0.01U Z 50V
IC803	410 429 8400	IC M5M29JB160AVP-10-B984	C1143	403 304 3300	ELECT 47U M 16V
IC804	410 352 4302	IC M5M51008BFPP-70L	C1144	403 164 0204	CERAMIC 0.1U Z 25V
	410 365 1602	IC M5M51008BFPP-70LL	C1145	403 321 2607	ELECT 10U M 16V
	410 367 1501	IC M5M51008CFP-70HI	C1146	403 283 6309	CERAMIC 1U Z 10V
IC806A	410 354 3808	IC MBM29LV800TA-90PFTN	C1148	403 164 0204	CERAMIC 0.1U Z 25V
IC808	409 339 3605	IC 24LC16BT/SN-T	C1162	403 139 7306	CERAMIC 18P J 50V
IC811	409 155 8006	IC TC7S04F-TE85L	C1163	403 157 3106	CERAMIC 56P J 50V
IC812	410 325 4605	IC TC74LCX244FT	C1165	403 266 8108	NP-ELECT 1U M 50V

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C141	403 162 6208	ELECT 1U M 50V	C2101	403 149 9208	CERAMIC 0.01U Z 50V
C142	403 175 4802	NP-ELECT 10U M 10V	C2102	403 149 9208	CERAMIC 0.01U Z 50V
C143	403 164 0204	CERAMIC 0.1U Z 25V	C2103	403 304 1801	ELECT 100U M 6.3V
C144	403 321 2607	ELECT 10U M 16V		403 373 7704	ELECT 100U M 6.3V
C145	403 283 6309	CERAMIC 1U Z 10V	C2104	403 164 0204	CERAMIC 0.1U Z 25V
C146	403 164 0204	CERAMIC 0.1U Z 25V	C2106	403 149 9208	CERAMIC 0.01U Z 50V
C147	403 304 3300	ELECT 47U M 16V	C2107	403 149 9208	CERAMIC 0.01U Z 50V
C148	403 283 6309	CERAMIC 1U Z 10V	C2108	403 266 8108	NP-ELECT 1U M 50V
C150TM	403 093 8302	OS-SOLID 47U M 10V	C211	403 164 0204	CERAMIC 0.1U Z 25V
C1501	403 304 1801	ELECT 100U M 6.3V	C2111	403 304 2105	ELECT 47U M 6.3V
	403 373 7704	ELECT 100U M 6.3V	C2112	403 164 0204	CERAMIC 0.1U Z 25V
C1502	403 164 0204	CERAMIC 0.1U Z 25V	C2113	403 304 2105	ELECT 47U M 6.3V
C1503	403 164 0204	CERAMIC 0.1U Z 25V	C2114	403 164 0204	CERAMIC 0.1U Z 25V
C1504	403 164 0204	CERAMIC 0.1U Z 25V	C2116	403 164 0204	CERAMIC 0.1U Z 25V
C1507	403 164 0204	CERAMIC 0.1U Z 25V	C2117	403 304 2105	ELECT 47U M 6.3V
C1508	403 164 0204	CERAMIC 0.1U Z 25V	C2118	403 164 0204	CERAMIC 0.1U Z 25V
C1509	403 164 0204	CERAMIC 0.1U Z 25V	C2119	403 164 0204	CERAMIC 0.1U Z 25V
C151	403 283 6309	CERAMIC 1U Z 10V	C2121	403 305 9905	CERAMIC 680P J 25V
C1511	403 304 3300	ELECT 47U M 16V	C2122	403 149 9208	CERAMIC 0.01U Z 50V
C1512	403 164 0204	CERAMIC 0.1U Z 25V	C2123	403 149 9208	CERAMIC 0.01U Z 50V
C1513	403 149 9208	CERAMIC 0.01U Z 50V	C2127	403 164 0204	CERAMIC 0.1U Z 25V
C1514	403 164 0204	CERAMIC 0.1U Z 25V	C213	403 157 2505	CERAMIC 27P J 50V
C152	403 266 8108	NP-ELECT 1U M 50V	C217	403 157 2505	CERAMIC 27P J 50V
C1531	403 304 1801	ELECT 100U M 6.3V	C219	403 157 2505	CERAMIC 27P J 50V
	403 373 7704	ELECT 100U M 6.3V	C2307	403 267 0804	NP-ELECT 47U M 6.3V
C1532	403 164 0204	CERAMIC 0.1U Z 25V	C2308	403 267 0804	NP-ELECT 47U M 6.3V
C1533	403 164 0204	CERAMIC 0.1U Z 25V	C2309	403 267 0804	NP-ELECT 47U M 6.3V
C1534	403 164 0204	CERAMIC 0.1U Z 25V	C2314	403 164 0204	CERAMIC 0.1U Z 25V
C1537	403 164 0204	CERAMIC 0.1U Z 25V	C2315	403 164 0204	CERAMIC 0.1U Z 25V
C1538	403 164 0204	CERAMIC 0.1U Z 25V	C2316	403 283 6309	CERAMIC 1U Z 10V
C1539	403 164 0204	CERAMIC 0.1U Z 25V	C2317	403 283 6309	CERAMIC 1U Z 10V
C1541	403 304 3300	ELECT 47U M 16V	C2318	403 283 6309	CERAMIC 1U Z 10V
C1542	403 164 0204	CERAMIC 0.1U Z 25V	C2319	403 283 6309	CERAMIC 1U Z 10V
C1543	403 149 9208	CERAMIC 0.01U Z 50V	C2321	403 283 6309	CERAMIC 1U Z 10V
C1544	403 164 0204	CERAMIC 0.1U Z 25V	C2322	403 283 6309	CERAMIC 1U Z 10V
C156	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	C2323	403 283 6309	CERAMIC 1U Z 10V
C1561	403 304 1801	ELECT 100U M 6.3V	C2324	403 283 6309	CERAMIC 1U Z 10V
	403 373 7704	ELECT 100U M 6.3V	C2325	403 283 6309	CERAMIC 1U Z 10V
C1562	403 164 0204	CERAMIC 0.1U Z 25V	C2326	403 280 0508	ELECT 470U M 4V
C1563	403 164 0204	CERAMIC 0.1U Z 25V	C2327	403 283 6309	CERAMIC 1U Z 10V
C1564	403 164 0204	CERAMIC 0.1U Z 25V	C2328	403 283 6309	CERAMIC 1U Z 10V
C1567	403 164 0204	CERAMIC 0.1U Z 25V	C2329	403 283 6309	CERAMIC 1U Z 10V
C1568	403 164 0204	CERAMIC 0.1U Z 25V	C2331	403 283 6309	CERAMIC 1U Z 10V
C1569	403 164 0204	CERAMIC 0.1U Z 25V	C2332	403 280 0508	ELECT 470U M 4V
C1571	403 304 3300	ELECT 47U M 16V	C2333	403 283 6309	CERAMIC 1U Z 10V
C1572	403 164 0204	CERAMIC 0.1U Z 25V	C2334	403 283 6309	CERAMIC 1U Z 10V
C1573	403 149 9208	CERAMIC 0.01U Z 50V	C2335	403 283 6309	CERAMIC 1U Z 10V
C1574	403 164 0204	CERAMIC 0.1U Z 25V	C2336	403 283 6309	CERAMIC 1U Z 10V
C158	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	C2337	403 283 6309	CERAMIC 1U Z 10V
C165	403 113 3805	CERAMIC 1000P K 50V	C2338	403 283 6309	CERAMIC 1U Z 10V
C1801	403 164 0204	CERAMIC 0.1U Z 25V	C2339	403 164 0204	CERAMIC 0.1U Z 25V
C1802	403 164 0204	CERAMIC 0.1U Z 25V	C2341	403 298 9609	CERAMIC 0.1U K 16V
C1803	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C1804	403 304 1801	ELECT 100U M 6.3V	C2342	403 113 3805	CERAMIC 1000P K 50V
	403 373 7704	ELECT 100U M 6.3V	C2343	403 283 6309	CERAMIC 1U Z 10V
C1861	403 164 0204	CERAMIC 0.1U Z 25V	C2344	403 283 6309	CERAMIC 1U Z 10V
C1871	403 164 0204	CERAMIC 0.1U Z 25V	C2345	403 280 0508	ELECT 470U M 4V
C1872	403 164 0204	CERAMIC 0.1U Z 25V	C2346	403 164 0204	CERAMIC 0.1U Z 25V
C201	403 164 0204	CERAMIC 0.1U Z 25V	C2347	403 164 0204	CERAMIC 0.1U Z 25V
C202	403 164 0204	CERAMIC 0.1U Z 25V	C2348	403 304 1801	ELECT 100U M 6.3V
C206	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C207	403 322 7809	ELECT 220U M 6.3V	C2349	403 164 0204	CERAMIC 0.1U Z 25V
	403 349 4706	ELECT 220U M 6.3V	C2351	403 164 0204	CERAMIC 0.1U Z 25V
C208	403 149 9208	CERAMIC 0.01U Z 50V	C2352	403 304 1801	ELECT 100U M 6.3V
C209	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C210	403 322 7809	ELECT 220U M 6.3V	C2354	403 164 0204	CERAMIC 0.1U Z 25V
	403 349 4706	ELECT 220U M 6.3V	C2356	403 164 0204	CERAMIC 0.1U Z 25V

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C2357	403 304 1801	ELECT 100U M 6.3V	C274	403 283 6309	CERAMIC 1U Z 10V
	403 373 7704	ELECT 100U M 6.3V	C276	403 283 6309	CERAMIC 1U Z 10V
C2358	403 283 6309	CERAMIC 1U Z 10V	C277	403 283 6309	CERAMIC 1U Z 10V
C2359	403 283 6309	CERAMIC 1U Z 10V	C278	403 283 6309	CERAMIC 1U Z 10V
C2361	403 164 0204	CERAMIC 0.1U Z 25V	C279	403 283 6309	CERAMIC 1U Z 10V
C2362	403 164 0204	CERAMIC 0.1U Z 25V	C281	403 283 6309	CERAMIC 1U Z 10V
C2363	403 164 0204	CERAMIC 0.1U Z 25V	C282	403 283 6309	CERAMIC 1U Z 10V
C2364	403 304 1801	ELECT 100U M 6.3V	C283	403 283 6309	CERAMIC 1U Z 10V
	403 373 7704	ELECT 100U M 6.3V	C285	403 164 0204	CERAMIC 0.1U Z 25V
C2365	403 283 6309	CERAMIC 1U Z 10V	C286	403 164 0204	CERAMIC 0.1U Z 25V
C2366	403 304 3300	ELECT 47U M 16V	C287	403 304 1801	ELECT 100U M 6.3V
C2367	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C2368	403 283 6309	CERAMIC 1U Z 10V	C289	403 164 0204	CERAMIC 0.1U Z 25V
C2369	403 283 6309	CERAMIC 1U Z 10V	C291	403 164 0204	CERAMIC 0.1U Z 25V
C2381	403 283 6309	CERAMIC 1U Z 10V	C292	403 304 1801	ELECT 100U M 6.3V
C2382	403 283 6309	CERAMIC 1U Z 10V		403 373 7704	ELECT 100U M 6.3V
C2383	403 304 1801	ELECT 100U M 6.3V	C293	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C294	403 164 0204	CERAMIC 0.1U Z 25V
C2384	403 113 3805	CERAMIC 1000P K 50V	C296	403 304 1801	ELECT 100U M 6.3V
C2413	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C242	403 164 0204	CERAMIC 0.1U Z 25V	C301	403 164 0204	CERAMIC 0.1U Z 25V
C243	403 164 0204	CERAMIC 0.1U Z 25V	C302	403 304 1801	ELECT 100U M 6.3V
C244	403 205 2808	CERAMIC 0.047U K 25V		403 373 7704	ELECT 100U M 6.3V
C246	403 283 6309	CERAMIC 1U Z 10V	C303	403 304 1801	ELECT 100U M 6.3V
C247	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C248	403 164 0204	CERAMIC 0.1U Z 25V	C304	403 164 0204	CERAMIC 0.1U Z 25V
C249	403 283 6309	CERAMIC 1U Z 10V	C307	403 164 0204	CERAMIC 0.1U Z 25V
C2501	403 162 5300	ELECT 4.7U M 25V	C308	403 164 0204	CERAMIC 0.1U Z 25V
C2502	403 164 0204	CERAMIC 0.1U Z 25V	C309	403 164 0204	CERAMIC 0.1U Z 25V
C2503	403 164 0204	CERAMIC 0.1U Z 25V	C3101	403 164 0204	CERAMIC 0.1U Z 25V
C2504	403 164 0204	CERAMIC 0.1U Z 25V	C3102	403 164 0204	CERAMIC 0.1U Z 25V
C2506	403 164 0204	CERAMIC 0.1U Z 25V	C3103	403 164 0204	CERAMIC 0.1U Z 25V
C2507	403 321 2607	ELECT 10U M 16V	C3104	403 149 9208	CERAMIC 0.01U Z 50V
C2508	403 164 0204	CERAMIC 0.1U Z 25V	C3106	403 304 2105	ELECT 47U M 6.3V
C251	403 164 0204	CERAMIC 0.1U Z 25V	C3107	403 343 8809	CERAMIC 0.47U Z 16V
C2511	403 162 5300	ELECT 4.7U M 25V	C3108	403 304 2105	ELECT 47U M 6.3V
C2512	403 164 0204	CERAMIC 0.1U Z 25V	C3109	403 343 8809	CERAMIC 0.47U Z 16V
C2514	403 164 0204	CERAMIC 0.1U Z 25V	C311	403 164 0204	CERAMIC 0.1U Z 25V
C2516	403 164 0204	CERAMIC 0.1U Z 25V	C3111	403 164 0204	CERAMIC 0.1U Z 25V
C2517	403 321 2607	ELECT 10U M 16V	C3112	403 164 0204	CERAMIC 0.1U Z 25V
C2518	403 164 0204	CERAMIC 0.1U Z 25V	C3113	403 164 0204	CERAMIC 0.1U Z 25V
C252	403 205 2808	CERAMIC 0.047U K 25V	C3114	403 162 5300	ELECT 4.7U M 25V
C2521	403 162 5300	ELECT 4.7U M 25V	C3116	403 304 2105	ELECT 47U M 6.3V
C2522	403 164 0204	CERAMIC 0.1U Z 25V	C3117	403 164 0204	CERAMIC 0.1U Z 25V
C2523	403 164 0204	CERAMIC 0.1U Z 25V	C3118	403 164 0204	CERAMIC 0.1U Z 25V
C2524	403 164 0204	CERAMIC 0.1U Z 25V	C3119	403 304 2105	ELECT 47U M 6.3V
C2526	403 164 0204	CERAMIC 0.1U Z 25V	C312	403 164 0204	CERAMIC 0.1U Z 25V
C2527	403 321 2607	ELECT 10U M 16V	C3121	403 157 1805	CERAMIC 9P D 50V
C2528	403 164 0204	CERAMIC 0.1U Z 25V	C3122	403 164 0204	CERAMIC 0.1U Z 25V
C253	403 283 6309	CERAMIC 1U Z 10V	C3123	403 149 9208	CERAMIC 0.01U Z 50V
C256	403 164 0204	CERAMIC 0.1U Z 25V	C3124	403 162 6000	ELECT 0.47U M 50V
C257	403 283 6309	CERAMIC 1U Z 10V	C3126	403 164 0204	CERAMIC 0.1U Z 25V
C259	403 205 2808	CERAMIC 0.047U K 25V	C3127	403 149 9208	CERAMIC 0.01U Z 50V
C2591	403 229 3508	ELECT 100U M 16V	C3128	403 164 0204	CERAMIC 0.1U Z 25V
	403 335 0408	ELECT 100U M 16V	C3129	403 164 0204	CERAMIC 0.1U Z 25V
C2592	403 164 0204	CERAMIC 0.1U Z 25V	C313	403 164 0204	CERAMIC 0.1U Z 25V
C261	403 283 6309	CERAMIC 1U Z 10V	C3131	403 284 4304	CERAMIC 0.022U K 50V
C262	403 164 0204	CERAMIC 0.1U Z 25V	C3132	403 162 6604	ELECT 2.2U M 50V
C263	403 283 6309	CERAMIC 1U Z 10V	C3133	403 113 3805	CERAMIC 1000P K 50V
C264	403 283 6309	CERAMIC 1U Z 10V	C3134	403 157 2901	CERAMIC 47P J 50V
C266	403 283 6309	CERAMIC 1U Z 10V	C3135	403 322 7809	ELECT 220U M 6.3V
C267	403 283 6309	CERAMIC 1U Z 10V		403 349 4706	ELECT 220U M 6.3V
C268	403 283 6309	CERAMIC 1U Z 10V	C3136	403 164 0204	CERAMIC 0.1U Z 25V
C269	403 283 6309	CERAMIC 1U Z 10V	C3137	403 164 0204	CERAMIC 0.1U Z 25V
C271	403 283 6309	CERAMIC 1U Z 10V	C3138	403 341 3905	POS-SOLID 100U M 6.3V
C272	403 157 7203	CERAMIC 3900P K 50V	C314	403 164 0204	CERAMIC 0.1U Z 25V
C273	403 338 0108	CERAMIC 0.039U K 25V	C315	403 164 0204	CERAMIC 0.1U Z 25V

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C316	403 164 0204	CERAMIC 0.1U Z 25V		403 335 0408	ELECT 100U M 16V
C317	403 164 0204	CERAMIC 0.1U Z 25V	C3672	403 164 0204	CERAMIC 0.1U Z 25V
C318	403 164 0204	CERAMIC 0.1U Z 25V	C3673	403 157 3601	CERAMIC 100P J 50V
C319	403 164 0204	CERAMIC 0.1U Z 25V	C3681	403 229 3508	ELECT 100U M 16V
C321	403 164 0204	CERAMIC 0.1U Z 25V		403 335 0408	ELECT 100U M 16V
C3210	403 304 1801	ELECT 100U M 6.3V	C3682	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C3683	403 157 3601	CERAMIC 100P J 50V
C3211	403 164 0204	CERAMIC 0.1U Z 25V	C3684	403 149 9208	CERAMIC 0.01U Z 50V
C3212	403 164 0204	CERAMIC 0.1U Z 25V	C391	403 164 0204	CERAMIC 0.1U Z 25V
C3213	403 164 0204	CERAMIC 0.1U Z 25V	C392	403 304 1801	ELECT 100U M 6.3V
C3214	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C3215	403 164 0204	CERAMIC 0.1U Z 25V	C393	403 164 0204	CERAMIC 0.1U Z 25V
C3216	403 164 0204	CERAMIC 0.1U Z 25V	C394	403 304 1801	ELECT 100U M 6.3V
C3217	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C3218	403 164 0204	CERAMIC 0.1U Z 25V	C395	403 164 0204	CERAMIC 0.1U Z 25V
C322	403 164 0204	CERAMIC 0.1U Z 25V	C396	403 347 5507	POS-SOLID 470U M 4V
C3227	403 164 0204	CERAMIC 0.1U Z 25V	C4001	403 343 8809	CERAMIC 0.47U Z 16V
C3228	403 164 0204	CERAMIC 0.1U Z 25V	C4002	403 343 8809	CERAMIC 0.47U Z 16V
C3229	403 149 9208	CERAMIC 0.01U Z 50V	C4003	403 343 8809	CERAMIC 0.47U Z 16V
C323	403 164 0204	CERAMIC 0.1U Z 25V	C4004	403 343 8809	CERAMIC 0.47U Z 16V
C3232	403 304 2105	ELECT 47U M 6.3V	C4005	403 343 8809	CERAMIC 0.47U Z 16V
C324	403 164 0204	CERAMIC 0.1U Z 25V	C4006	403 298 9609	CERAMIC 0.1U K 16V
C326	403 149 9208	CERAMIC 0.01U Z 50V		403 325 3303	CERAMIC 0.1U K 16V
C329	403 164 0204	CERAMIC 0.1U Z 25V	C4007	403 298 9609	CERAMIC 0.1U K 16V
C341	403 304 2105	ELECT 47U M 6.3V		403 325 3303	CERAMIC 0.1U K 16V
C342	403 164 0204	CERAMIC 0.1U Z 25V	C4008	403 298 9609	CERAMIC 0.1U K 16V
C343	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C3501	403 164 0204	CERAMIC 0.1U Z 25V	C4009	403 298 9609	CERAMIC 0.1U K 16V
C3502	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C3503	403 304 2105	ELECT 47U M 6.3V	C401	403 304 1801	ELECT 100U M 6.3V
C3504	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C3506	403 304 3300	ELECT 47U M 16V	C4010	403 298 9609	CERAMIC 0.1U K 16V
C3507	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C351	403 304 2105	ELECT 47U M 6.3V	C4011	403 149 9208	CERAMIC 0.01U Z 50V
C352	403 164 0204	CERAMIC 0.1U Z 25V	C4012	403 286 8201	ELECT 1000U M 6.3V
C3551	403 164 0204	CERAMIC 0.1U Z 25V	C4013	403 283 2707	CERAMIC 0.01U K 16V
C3552	403 304 2105	ELECT 47U M 6.3V	C4014	403 283 6309	CERAMIC 1U Z 10V
C3553	403 164 0204	CERAMIC 0.1U Z 25V	C4015	403 298 9609	CERAMIC 0.1U K 16V
C3554	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C3571	403 304 3300	ELECT 47U M 16V	C4016	403 155 4204	CERAMIC 15P J 50V
C3572	403 304 1801	ELECT 100U M 6.3V	C4017	403 286 8201	ELECT 1000U M 6.3V
	403 373 7704	ELECT 100U M 6.3V	C4018	403 149 9208	CERAMIC 0.01U Z 50V
C3573	403 164 0204	CERAMIC 0.1U Z 25V	C4019	403 343 8809	CERAMIC 0.47U Z 16V
C3574	403 283 6309	CERAMIC 1U Z 10V	C402	403 164 0204	CERAMIC 0.1U Z 25V
C3601	403 321 2607	ELECT 10U M 16V	C4020	403 157 1904	CERAMIC 10P D 50V
C361	403 164 0204	CERAMIC 0.1U Z 25V	C4021	403 343 8809	CERAMIC 0.47U Z 16V
C3611	403 164 0204	CERAMIC 0.1U Z 25V	C4022	403 343 8809	CERAMIC 0.47U Z 16V
C3612	403 229 3508	ELECT 100U M 16V	C4023	403 343 8809	CERAMIC 0.47U Z 16V
	403 335 0408	ELECT 100U M 16V	C4024	403 343 8809	CERAMIC 0.47U Z 16V
C3613	403 164 0204	CERAMIC 0.1U Z 25V	C4025	403 286 8201	ELECT 1000U M 6.3V
C3614	403 164 0204	CERAMIC 0.1U Z 25V	C4026	403 149 9208	CERAMIC 0.01U Z 50V
C362	403 164 0204	CERAMIC 0.1U Z 25V	C4027	403 343 8809	CERAMIC 0.47U Z 16V
C3631	403 164 0204	CERAMIC 0.1U Z 25V	C4028	403 343 8809	CERAMIC 0.47U Z 16V
C3632	403 229 3508	ELECT 100U M 16V	C4029	403 343 8809	CERAMIC 0.47U Z 16V
	403 335 0408	ELECT 100U M 16V	C403	403 304 1801	ELECT 100U M 6.3V
C3633	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C3634	403 164 0204	CERAMIC 0.1U Z 25V	C4031	403 298 9609	CERAMIC 0.1U K 16V
C3636	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C3637	403 164 0204	CERAMIC 0.1U Z 25V	C4032	403 298 9609	CERAMIC 0.1U K 16V
C3651	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C3652	403 164 0204	CERAMIC 0.1U Z 25V	C4034	403 283 6309	CERAMIC 1U Z 10V
C3653	403 229 3508	ELECT 100U M 16V	C4035	403 304 2105	ELECT 47U M 6.3V
	403 335 0408	ELECT 100U M 16V	C4038	403 341 3905	POS-SOLID 100U M 6.3V
C3654	403 164 0204	CERAMIC 0.1U Z 25V	C4039	403 164 0204	CERAMIC 0.1U Z 25V
C3656	403 164 0204	CERAMIC 0.1U Z 25V	C404	403 164 0204	CERAMIC 0.1U Z 25V
C3657	403 164 0204	CERAMIC 0.1U Z 25V	C4041	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
C3671	403 229 3508	ELECT 100U M 16V	C405	403 164 0204	CERAMIC 0.1U Z 25V

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C406	403 164 0204	CERAMIC 0.1U Z 25V	C4504	403 283 2707	CERAMIC 0.01U K 16V
C407	403 164 0204	CERAMIC 0.1U Z 25V	C4505	403 283 2707	CERAMIC 0.01U K 16V
C408	403 164 0204	CERAMIC 0.1U Z 25V	C4506	403 283 2707	CERAMIC 0.01U K 16V
C409	403 164 0204	CERAMIC 0.1U Z 25V	C4507	403 343 8809	CERAMIC 0.47U Z 16V
C411	403 164 0204	CERAMIC 0.1U Z 25V	C451	403 304 1801	ELECT 100U M 6.3V
C412	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C413	403 164 0204	CERAMIC 0.1U Z 25V	C4512	403 343 8809	CERAMIC 0.47U Z 16V
C414	403 164 0204	CERAMIC 0.1U Z 25V	C4513	403 162 5300	ELECT 4.7U M 25V
C415	403 164 0204	CERAMIC 0.1U Z 25V	C4514	403 283 6309	CERAMIC 1U Z 10V
C416	403 164 0204	CERAMIC 0.1U Z 25V	C4515	403 286 8201	ELECT 1000U M 6.3V
C417	403 164 0204	CERAMIC 0.1U Z 25V	C4516	403 298 9609	CERAMIC 0.1U K 16V
C418	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C419	403 164 0204	CERAMIC 0.1U Z 25V	C4517	403 298 9609	CERAMIC 0.1U K 16V
C4201	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C4202	403 304 1801	ELECT 100U M 6.3V	C4518	403 298 9609	CERAMIC 0.1U K 16V
	403 373 7704	ELECT 100U M 6.3V		403 325 3303	CERAMIC 0.1U K 16V
C4203	403 164 0204	CERAMIC 0.1U Z 25V	C452	403 164 0204	CERAMIC 0.1U Z 25V
C4204	403 164 0204	CERAMIC 0.1U Z 25V	C4522	403 164 0204	CERAMIC 0.1U Z 25V
C4206	403 164 0204	CERAMIC 0.1U Z 25V	C4523	403 229 3508	ELECT 100U M 16V
C421	403 164 0204	CERAMIC 0.1U Z 25V		403 335 0408	ELECT 100U M 16V
C4211	403 164 0204	CERAMIC 0.1U Z 25V	C4524	403 155 2309	CERAMIC 4700P K 50V
C4212	403 304 1801	ELECT 100U M 6.3V	C4525	403 162 6000	ELECT 0.47U M 50V
	403 373 7704	ELECT 100U M 6.3V	C4526	403 283 6309	CERAMIC 1U Z 10V
C4213	403 164 0204	CERAMIC 0.1U Z 25V	C4527	403 164 0204	CERAMIC 0.1U Z 25V
C4214	403 164 0204	CERAMIC 0.1U Z 25V	C4528	403 304 3102	ELECT 22U M 16V
C4216	403 164 0204	CERAMIC 0.1U Z 25V	C453	403 304 1801	ELECT 100U M 6.3V
C4217	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C4218	403 164 0204	CERAMIC 0.1U Z 25V	C4536	403 343 8809	CERAMIC 0.47U Z 16V
C4219	403 164 0204	CERAMIC 0.1U Z 25V	C4537	403 283 2707	CERAMIC 0.01U K 16V
C4221	403 164 0204	CERAMIC 0.1U Z 25V	C454	403 164 0204	CERAMIC 0.1U Z 25V
C4222	403 164 0204	CERAMIC 0.1U Z 25V	C4540	403 283 2707	CERAMIC 0.01U K 16V
C4223	403 164 0204	CERAMIC 0.1U Z 25V	C4542	403 164 0204	CERAMIC 0.1U Z 25V
C4224	403 164 0204	CERAMIC 0.1U Z 25V	C4543	403 304 3300	ELECT 47U M 16V
C4226	403 164 0204	CERAMIC 0.1U Z 25V	C4544	403 229 3508	ELECT 100U M 16V
C4227	403 164 0204	CERAMIC 0.1U Z 25V		403 335 0408	ELECT 100U M 16V
C4228	403 164 0204	CERAMIC 0.1U Z 25V	C4545	403 164 0204	CERAMIC 0.1U Z 25V
C4229	403 164 0204	CERAMIC 0.1U Z 25V	C4546	403 157 1904	CERAMIC 10P D 50V
C4230	403 164 0204	CERAMIC 0.1U Z 25V	C4547	403 157 1904	CERAMIC 10P D 50V
C4231	403 304 2105	ELECT 47U M 6.3V	C4548	403 157 1904	CERAMIC 10P D 50V
C4233	403 164 0204	CERAMIC 0.1U Z 25V	C4549	403 149 9208	CERAMIC 0.01U Z 50V
C4234	403 304 2105	ELECT 47U M 6.3V	C4551	403 164 0204	CERAMIC 0.1U Z 25V
C4236	403 164 0204	CERAMIC 0.1U Z 25V	C4552	403 322 1807	ELECT 47U M 16V
C4237	403 155 1302	CERAMIC 150P J 50V	C4553	403 164 0204	CERAMIC 0.1U Z 25V
C4238	403 155 2200	CERAMIC 3300P K 50V	C4555	403 164 0204	CERAMIC 0.1U Z 25V
C4239	403 304 2105	ELECT 47U M 6.3V	C4585	403 149 9208	CERAMIC 0.01U Z 50V
C4241	403 164 0204	CERAMIC 0.1U Z 25V	C4586	403 304 3102	ELECT 22U M 16V
C4246	403 164 0204	CERAMIC 0.1U Z 25V	C4587	403 164 0204	CERAMIC 0.1U Z 25V
C4247	403 164 0204	CERAMIC 0.1U Z 25V	C4588	403 149 9208	CERAMIC 0.01U Z 50V
C4251	403 304 1801	ELECT 100U M 6.3V	C4601	403 157 2505	CERAMIC 27P J 50V
	403 373 7704	ELECT 100U M 6.3V	C4602	403 145 9905	CERAMIC 22P J 50V
C4252	403 164 0204	CERAMIC 0.1U Z 25V	C4603	403 157 2505	CERAMIC 27P J 50V
C4253	403 164 0204	CERAMIC 0.1U Z 25V	C4604	403 145 9905	CERAMIC 22P J 50V
C4262	403 164 0204	CERAMIC 0.1U Z 25V	C4606	403 157 2505	CERAMIC 27P J 50V
C4263	403 164 0204	CERAMIC 0.1U Z 25V	C4607	403 145 9905	CERAMIC 22P J 50V
C4272	403 164 0204	CERAMIC 0.1U Z 25V	C4608	403 304 3102	ELECT 22U M 16V
C4273	403 164 0204	CERAMIC 0.1U Z 25V	C4609	403 164 0204	CERAMIC 0.1U Z 25V
C4281	403 164 0204	CERAMIC 0.1U Z 25V	C4706	403 283 6309	CERAMIC 1U Z 10V
C4291	403 304 1801	ELECT 100U M 6.3V	C4801	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C4802	403 164 0204	CERAMIC 0.1U Z 25V
C4292	403 164 0204	CERAMIC 0.1U Z 25V	C4803	403 164 0204	CERAMIC 0.1U Z 25V
C4293	403 304 1801	ELECT 100U M 6.3V	C4804	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C4808	403 304 1801	ELECT 100U M 6.3V
C4294	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C4295	403 347 5507	POS-SOLID 470U M 4V	C4811	403 283 6309	CERAMIC 1U Z 10V
C4501	403 283 2707	CERAMIC 0.01U K 16V	C4813	403 304 1801	ELECT 100U M 6.3V
C4502	403 283 2707	CERAMIC 0.01U K 16V		403 373 7704	ELECT 100U M 6.3V
C4503	403 283 2707	CERAMIC 0.01U K 16V	C4814	403 164 0204	CERAMIC 0.1U Z 25V



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Key No.	Part No.	Description	Key No.	Part No.	Description
C4821	403 164 0204	CERAMIC 0.1U Z 25V	C6326	403 113 3805	CERAMIC 1000P K 50V
C4822	403 164 0204	CERAMIC 0.1U Z 25V	C6327	403 164 0204	CERAMIC 0.1U Z 25V
C4831	403 164 0204	CERAMIC 0.1U Z 25V	C6328	403 164 0204	CERAMIC 0.1U Z 25V
C4836	403 164 0204	CERAMIC 0.1U Z 25V	C6329	403 164 0204	CERAMIC 0.1U Z 25V
C4841	403 164 0204	CERAMIC 0.1U Z 25V	C6331	403 164 0204	CERAMIC 0.1U Z 25V
C4842	403 164 0204	CERAMIC 0.1U Z 25V	C6332	403 113 3805	CERAMIC 1000P K 50V
C4851	403 164 0204	CERAMIC 0.1U Z 25V	C6333	403 164 0204	CERAMIC 0.1U Z 25V
C4861	403 164 0204	CERAMIC 0.1U Z 25V	C6334	403 113 3805	CERAMIC 1000P K 50V
C501	403 304 1801	ELECT 100U M 6.3V	C6335	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C6341	403 164 0204	CERAMIC 0.1U Z 25V
C502	403 164 0204	CERAMIC 0.1U Z 25V	C6343	403 164 0204	CERAMIC 0.1U Z 25V
C503	403 164 0204	CERAMIC 0.1U Z 25V	C6344	403 113 3805	CERAMIC 1000P K 50V
C504	403 164 0204	CERAMIC 0.1U Z 25V	C6346	403 113 3805	CERAMIC 1000P K 50V
C507	403 164 0204	CERAMIC 0.1U Z 25V	C6347	403 164 0204	CERAMIC 0.1U Z 25V
C508	403 164 0204	CERAMIC 0.1U Z 25V	C6348	403 164 0204	CERAMIC 0.1U Z 25V
C509	403 164 0204	CERAMIC 0.1U Z 25V	C6349	403 164 0204	CERAMIC 0.1U Z 25V
C511	403 304 3300	ELECT 47U M 16V	C6351	403 164 0204	CERAMIC 0.1U Z 25V
C512	403 164 0204	CERAMIC 0.1U Z 25V	C6352	403 113 3805	CERAMIC 1000P K 50V
C513	403 149 9208	CERAMIC 0.01U Z 50V	C6353	403 164 0204	CERAMIC 0.1U Z 25V
C514	403 164 0204	CERAMIC 0.1U Z 25V	C6354	403 113 3805	CERAMIC 1000P K 50V
C526	403 164 0204	CERAMIC 0.1U Z 25V	C6355	403 164 0204	CERAMIC 0.1U Z 25V
C527	403 164 0204	CERAMIC 0.1U Z 25V	C6361	403 164 0204	CERAMIC 0.1U Z 25V
C531	403 304 1801	ELECT 100U M 6.3V	C6364	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C6365	403 113 3805	CERAMIC 1000P K 50V
C532	403 164 0204	CERAMIC 0.1U Z 25V	C6366	403 113 3805	CERAMIC 1000P K 50V
C533	403 164 0204	CERAMIC 0.1U Z 25V	C6367	403 164 0204	CERAMIC 0.1U Z 25V
C534	403 164 0204	CERAMIC 0.1U Z 25V	C6368	403 164 0204	CERAMIC 0.1U Z 25V
C537	403 164 0204	CERAMIC 0.1U Z 25V	C6369	403 164 0204	CERAMIC 0.1U Z 25V
C538	403 164 0204	CERAMIC 0.1U Z 25V	C6371	403 164 0204	CERAMIC 0.1U Z 25V
C539	403 164 0204	CERAMIC 0.1U Z 25V	C6372	403 113 3805	CERAMIC 1000P K 50V
C541	403 304 3300	ELECT 47U M 16V	C6373	403 164 0204	CERAMIC 0.1U Z 25V
C542	403 164 0204	CERAMIC 0.1U Z 25V	C6374	403 113 3805	CERAMIC 1000P K 50V
C543	403 149 9208	CERAMIC 0.01U Z 50V	C6376	403 164 0204	CERAMIC 0.1U Z 25V
C544	403 164 0204	CERAMIC 0.1U Z 25V	C8001	403 304 1801	ELECT 100U M 6.3V
C546	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C547	403 164 0204	CERAMIC 0.1U Z 25V	C8002	403 283 6309	CERAMIC 1U Z 10V
C561	403 304 1801	ELECT 100U M 6.3V	C8003	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V		403 373 7704	ELECT 100U M 6.3V
C562	403 164 0204	CERAMIC 0.1U Z 25V	C8004	403 283 6309	CERAMIC 1U Z 10V
C563	403 164 0204	CERAMIC 0.1U Z 25V	C8005	403 169 2807	CERAMIC 330P J 50V
C564	403 164 0204	CERAMIC 0.1U Z 25V	C8006	403 283 6309	CERAMIC 1U Z 10V
C567	403 164 0204	CERAMIC 0.1U Z 25V	C8007	403 304 1801	ELECT 100U M 6.3V
C568	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C569	403 164 0204	CERAMIC 0.1U Z 25V	C8008	403 157 3601	CERAMIC 100P J 50V
C571	403 304 3300	ELECT 47U M 16V	C8009	403 157 3601	CERAMIC 100P J 50V
C572	403 164 0204	CERAMIC 0.1U Z 25V	C801	403 164 0204	CERAMIC 0.1U Z 25V
C573	403 149 9208	CERAMIC 0.01U Z 50V	C8010	403 157 3601	CERAMIC 100P J 50V
C574	403 164 0204	CERAMIC 0.1U Z 25V	C8011	403 157 3601	CERAMIC 100P J 50V
C576	403 164 0204	CERAMIC 0.1U Z 25V	C8012	403 157 3601	CERAMIC 100P J 50V
C577	403 164 0204	CERAMIC 0.1U Z 25V	C8013	403 164 0204	CERAMIC 0.1U Z 25V
C6301	403 164 0204	CERAMIC 0.1U Z 25V	C8014	403 304 1801	ELECT 100U M 6.3V
C6302	403 304 1801	ELECT 100U M 6.3V		403 373 7704	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V	C8015	403 283 6309	CERAMIC 1U Z 10V
C6303	403 164 0204	CERAMIC 0.1U Z 25V	C8016	403 155 1500	CERAMIC 180P J 50V
C6304	403 113 3805	CERAMIC 1000P K 50V	C8017	403 169 2807	CERAMIC 330P J 50V
C6305	403 113 3805	CERAMIC 1000P K 50V	C8018	403 169 2807	CERAMIC 330P J 50V
C6306	403 164 0204	CERAMIC 0.1U Z 25V	C8019	403 155 1500	CERAMIC 180P J 50V
C6307	403 164 0204	CERAMIC 0.1U Z 25V	C802	403 164 0204	CERAMIC 0.1U Z 25V
C6308	403 164 0204	CERAMIC 0.1U Z 25V	C8020	403 169 2807	CERAMIC 330P J 50V
C6309	403 164 0204	CERAMIC 0.1U Z 25V	C8021	403 169 2807	CERAMIC 330P J 50V
C6311	403 113 3805	CERAMIC 1000P K 50V	C8022	403 155 1500	CERAMIC 180P J 50V
C6312	403 164 0204	CERAMIC 0.1U Z 25V	C803	403 155 1609	CERAMIC 33P J 50V
C6313	403 113 3805	CERAMIC 1000P K 50V	C8031	403 304 2105	ELECT 47U M 6.3V
C6314	403 164 0204	CERAMIC 0.1U Z 25V	C8032	403 164 0204	CERAMIC 0.1U Z 25V
C6321	403 164 0204	CERAMIC 0.1U Z 25V	C8033	403 164 0204	CERAMIC 0.1U Z 25V
C6323	403 164 0204	CERAMIC 0.1U Z 25V	C804	403 155 1609	CERAMIC 33P J 50V
C6324	403 113 3805	CERAMIC 1000P K 50V	C806	403 304 2105	ELECT 47U M 6.3V

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C807	403 164 0204	CERAMIC 0.1U Z 25V	C9502	403 164 0204	CERAMIC 0.1U Z 25V
C808	403 215 1006	CERAMIC 470P J 50V	C9503	403 164 0204	CERAMIC 0.1U Z 25V
C809	403 283 6309	CERAMIC 1U Z 10V	C9504	403 164 0204	CERAMIC 0.1U Z 25V
C811	403 164 0204	CERAMIC 0.1U Z 25V	C9506	403 164 0204	CERAMIC 0.1U Z 25V
C812	403 164 0204	CERAMIC 0.1U Z 25V	C9507	403 164 0204	CERAMIC 0.1U Z 25V
C813	403 164 0204	CERAMIC 0.1U Z 25V	C9508	403 164 0204	CERAMIC 0.1U Z 25V
C814	403 304 1801	ELECT 100U M 6.3V	C9509	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C9511	403 164 0204	CERAMIC 0.1U Z 25V
C815	403 164 0204	CERAMIC 0.1U Z 25V	C9512	403 164 0204	CERAMIC 0.1U Z 25V
C816	403 164 0204	CERAMIC 0.1U Z 25V	C9513	403 164 0204	CERAMIC 0.1U Z 25V
C817	403 164 0204	CERAMIC 0.1U Z 25V	C9514	403 164 0204	CERAMIC 0.1U Z 25V
C818	403 304 1801	ELECT 100U M 6.3V	C9516	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C9517	403 164 0204	CERAMIC 0.1U Z 25V
C819	403 164 0204	CERAMIC 0.1U Z 25V	C9518	403 164 0204	CERAMIC 0.1U Z 25V
C820	403 164 0204	CERAMIC 0.1U Z 25V	C9551	403 304 1801	ELECT 100U M 6.3V
C821	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C822	403 164 0204	CERAMIC 0.1U Z 25V	C9552	403 164 0204	CERAMIC 0.1U Z 25V
C823	403 164 0204	CERAMIC 0.1U Z 25V	C9553	403 304 1801	ELECT 100U M 6.3V
C824	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C9403	403 304 1801	ELECT 100U M 6.3V	C9554	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C9801	403 304 1801	ELECT 100U M 6.3V
C9404	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C9406	403 304 1801	ELECT 100U M 6.3V	C9802	403 164 0204	CERAMIC 0.1U Z 25V
	403 373 7704	ELECT 100U M 6.3V	C9803	403 153 9102	CERAMIC 5P C 50V
C9407	403 164 0204	CERAMIC 0.1U Z 25V	C9804	403 113 3805	CERAMIC 1000P K 50V
C9411	403 164 0204	CERAMIC 0.1U Z 25V	C9805	403 298 9609	CERAMIC 0.1U K 16V
C9412	403 164 0204	CERAMIC 0.1U Z 25V		403 325 3303	CERAMIC 0.1U K 16V
C9413	403 164 0204	CERAMIC 0.1U Z 25V	C9806	403 164 0204	CERAMIC 0.1U Z 25V
C9414	403 164 0204	CERAMIC 0.1U Z 25V	C9807	403 304 1801	ELECT 100U M 6.3V
C9416	403 164 0204	CERAMIC 0.1U Z 25V		403 373 7704	ELECT 100U M 6.3V
C9417	403 164 0204	CERAMIC 0.1U Z 25V	C9808	403 164 0204	CERAMIC 0.1U Z 25V
C9418	403 164 0204	CERAMIC 0.1U Z 25V	C9809	403 164 0204	CERAMIC 0.1U Z 25V
C9419	403 164 0204	CERAMIC 0.1U Z 25V	C9821	403 164 0204	CERAMIC 0.1U Z 25V
C9421	403 164 0204	CERAMIC 0.1U Z 25V	C9822	403 164 0204	CERAMIC 0.1U Z 25V
C9422	403 164 0204	CERAMIC 0.1U Z 25V	<b>RESISTOR</b>		
C9423	403 164 0204	CERAMIC 0.1U Z 25V	RB401	645 037 0663	R-NETWORK 22X4 0.063W
C9426	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9427	403 164 0204	CERAMIC 0.1U Z 25V	RB402	645 037 0663	R-NETWORK 22X4 0.063W
C9428	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9429	403 164 0204	CERAMIC 0.1U Z 25V	RB403	645 037 0663	R-NETWORK 22X4 0.063W
C9431	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9432	403 164 0204	CERAMIC 0.1U Z 25V	RB404	645 037 0663	R-NETWORK 22X4 0.063W
C9433	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9434	403 164 0204	CERAMIC 0.1U Z 25V	RB406	645 037 0663	R-NETWORK 22X4 0.063W
C9436	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9437	403 164 0204	CERAMIC 0.1U Z 25V	RB407	645 037 0663	R-NETWORK 22X4 0.063W
C9438	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9439	403 164 0204	CERAMIC 0.1U Z 25V	RB408	645 037 0663	R-NETWORK 22X4 0.063W
C9441	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9442	403 164 0204	CERAMIC 0.1U Z 25V	RB409	645 037 0663	R-NETWORK 22X4 0.063W
C9443	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9444	403 164 0204	CERAMIC 0.1U Z 25V	RB411	645 037 0663	R-NETWORK 22X4 0.063W
C9451	403 304 1801	ELECT 100U M 6.3V		645 021 4943	R-NETWORK 22X4 1/16W
	403 373 7704	ELECT 100U M 6.3V	RB412	645 037 0663	R-NETWORK 22X4 0.063W
C9452	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9453	403 164 0204	CERAMIC 0.1U Z 25V	RB413	645 037 0663	R-NETWORK 22X4 0.063W
C9454	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9456	403 164 0204	CERAMIC 0.1U Z 25V	RB414	645 037 0663	R-NETWORK 22X4 0.063W
C9457	403 164 0204	CERAMIC 0.1U Z 25V		645 021 4943	R-NETWORK 22X4 1/16W
C9458	403 164 0204	CERAMIC 0.1U Z 25V	RB4801	645 021 0358	R-NETWORK 100X4 0.063W
C9459	403 164 0204	CERAMIC 0.1U Z 25V		645 031 3325	R-NETWORK 100X4 1/16W
C9461	403 164 0204	CERAMIC 0.1U Z 25V	RB501	645 037 3107	R-NETWORK 10X4 0.063W
C9462	403 164 0204	CERAMIC 0.1U Z 25V		645 028 5981	R-NETWORK 10X4 1/16W
C9463	403 164 0204	CERAMIC 0.1U Z 25V	RB502	645 037 3107	R-NETWORK 10X4 0.063W
C9465	403 164 0204	CERAMIC 0.1U Z 25V		645 028 5981	R-NETWORK 10X4 1/16W
C9501	403 304 1801	ELECT 100U M 6.3V	RB503	645 037 3107	R-NETWORK 10X4 0.063W
	403 373 7704	ELECT 100U M 6.3V		645 028 5981	R-NETWORK 10X4 1/16W



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
RB531	645 037 3107	R-NETWORK 10X4 0.063W	R1102	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1103	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB532	645 037 3107	R-NETWORK 10X4 0.063W	R1104	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1105	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB533	645 037 3107	R-NETWORK 10X4 0.063W	R1106	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1107	401 105 2706	MT-GLAZE 220 JA 1/16W
RB561	645 037 3107	R-NETWORK 10X4 0.063W	R1108	401 105 2706	MT-GLAZE 220 JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1109	401 105 5202	MT-GLAZE 470 JA 1/16W
RB562	645 037 3107	R-NETWORK 10X4 0.063W	R1112	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1113	401 105 0702	MT-GLAZE 100K JA 1/16W
RB563	645 037 3107	R-NETWORK 10X4 0.063W	R1114	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1115	401 105 0504	MT-GLAZE 1K JA 1/16W
RB8001	645 037 3107	R-NETWORK 10X4 0.063W	R1116	401 105 0504	MT-GLAZE 1K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1117	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB8002	645 037 3107	R-NETWORK 10X4 0.063W	R1118	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1121	401 105 0504	MT-GLAZE 1K JA 1/16W
RB8003	645 037 3107	R-NETWORK 10X4 0.063W	R1123	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1124	401 105 0504	MT-GLAZE 1K JA 1/16W
RB8004	645 037 3107	R-NETWORK 10X4 0.063W	R1126	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1127	401 105 4601	MT-GLAZE 3.9K JA 1/16W
RB8005	645 037 3107	R-NETWORK 10X4 0.063W	R1128	401 105 0603	MT-GLAZE 10K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1129	401 105 8104	MT-GLAZE 56K JA 1/16W
RB8006	645 037 3107	R-NETWORK 10X4 0.063W	R1131	401 105 5400	MT-GLAZE 47K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1132	401 105 0504	MT-GLAZE 1K JA 1/16W
RB8007	645 037 3107	R-NETWORK 10X4 0.063W	R1133	401 105 2003	MT-GLAZE 1.8K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1134	401 105 6506	MT-GLAZE 680 JA 1/16W
RB8008	645 037 3107	R-NETWORK 10X4 0.063W	R1135	401 105 3307	MT-GLAZE 2.7K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1136	401 105 2706	MT-GLAZE 220 JA 1/16W
RB8009	645 037 3107	R-NETWORK 10X4 0.063W	R1137	401 105 6506	MT-GLAZE 680 JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1139	401 105 5103	MT-GLAZE 47 JA 1/16W
RB801	645 037 4920	R-NETWORK 3.3KX4 0.063W	R1141	401 105 0504	MT-GLAZE 1K JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R1142	401 105 8104	MT-GLAZE 56K JA 1/16W
RB8010	645 037 3107	R-NETWORK 10X4 0.063W	R1143	401 105 5400	MT-GLAZE 47K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1144	401 105 0504	MT-GLAZE 1K JA 1/16W
RB8011	645 037 3107	R-NETWORK 10X4 0.063W	R1145	401 105 2003	MT-GLAZE 1.8K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1146	401 105 6506	MT-GLAZE 680 JA 1/16W
RB8012	645 037 3107	R-NETWORK 10X4 0.063W	R1147	401 105 3307	MT-GLAZE 2.7K JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1148	401 105 2706	MT-GLAZE 220 JA 1/16W
RB8013	645 037 3107	R-NETWORK 10X4 0.063W	R1149	401 105 6506	MT-GLAZE 680 JA 1/16W
	645 028 5981	R-NETWORK 10X4 1/16W	R1152	401 105 5202	MT-GLAZE 470 JA 1/16W
RB802	645 037 4920	R-NETWORK 3.3KX4 0.063W	R1153	401 105 5103	MT-GLAZE 47 JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R1154	401 105 0504	MT-GLAZE 1K JA 1/16W
RB803	645 037 4920	R-NETWORK 3.3KX4 0.063W	R1155	401 105 5202	MT-GLAZE 470 JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R1160	401 105 0603	MT-GLAZE 10K JA 1/16W
RB804	645 037 4920	R-NETWORK 3.3KX4 0.063W	R1161	401 105 0504	MT-GLAZE 1K JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R1163	401 105 0504	MT-GLAZE 1K JA 1/16W
RB9411	645 027 1519	R-NETWORK 0X4 1/16W	R1164	401 105 4601	MT-GLAZE 3.9K JA 1/16W
RB9412	645 027 1519	R-NETWORK 0X4 1/16W	R1303	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB9413	645 027 1519	R-NETWORK 0X4 1/16W	R1304	401 105 0603	MT-GLAZE 10K JA 1/16W
RB9414	645 027 1519	R-NETWORK 0X4 1/16W	R1305	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB9416	645 027 1519	R-NETWORK 0X4 1/16W	R1307	401 105 0603	MT-GLAZE 10K JA 1/16W
RB9417	645 027 1519	R-NETWORK 0X4 1/16W	R1308	401 105 0603	MT-GLAZE 10K JA 1/16W
RB9418	645 027 1519	R-NETWORK 0X4 1/16W	R1309	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB9419	645 027 1519	R-NETWORK 0X4 1/16W	R1313	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB9501	645 027 1519	R-NETWORK 0X4 1/16W	R140	401 105 2805	MT-GLAZE 2.2K JA 1/16W
RB9502	645 027 1519	R-NETWORK 0X4 1/16W	R141	401 105 2904	MT-GLAZE 22K JA 1/16W
RB9503	645 027 1519	R-NETWORK 0X4 1/16W	R142	401 105 1600	MT-GLAZE 15K JA 1/16W
RB9504	645 027 1519	R-NETWORK 0X4 1/16W	R143	401 105 0504	MT-GLAZE 1K JA 1/16W
RB9506	645 027 1519	R-NETWORK 0X4 1/16W	R144	401 105 0504	MT-GLAZE 1K JA 1/16W
RB9507	645 027 1519	R-NETWORK 0X4 1/16W	R145	401 105 4809	MT-GLAZE 390K JA 1/16W
RB9509	645 027 1519	R-NETWORK 0X4 1/16W	R146	401 105 4106	MT-GLAZE 3.3K JA 1/16W
RB9511	645 027 1519	R-NETWORK 0X4 1/16W	R147	401 105 6001	MT-GLAZE 5.6K JA 1/16W
RB9801	645 021 0365	R-NETWORK 100KX4 0.063W	R148	401 105 0405	MT-GLAZE 100 JA 1/16W
	645 025 5397	R-NETWORK 100KX4 1/16W	R149	401 105 0504	MT-GLAZE 1K JA 1/16W
RB9802	645 021 0365	R-NETWORK 100KX4 0.063W	R1502	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 025 5397	R-NETWORK 100KX4 1/16W	R1504	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1101	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R151	401 105 6506	MT-GLAZE 680 JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R152	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R2112	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R153	401 105 0504	MT-GLAZE 1K JA 1/16W	R2113	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1532	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R212	401 105 0603	MT-GLAZE 10K JA 1/16W
R1533	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R213	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R154	401 105 0504	MT-GLAZE 1K JA 1/16W	R214	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R155	401 105 0504	MT-GLAZE 1K JA 1/16W	R215	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R156	401 105 0504	MT-GLAZE 1K JA 1/16W	R216	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1562	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R217	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1563	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R219	401 105 3901	MT-GLAZE 33 JA 1/16W
R157	401 105 0504	MT-GLAZE 1K JA 1/16W	R221	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R158	401 105 2706	MT-GLAZE 220 JA 1/16W	R224	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R159	401 105 3000	MT-GLAZE 220K JA 1/16W	R226	401 105 3901	MT-GLAZE 33 JA 1/16W
R161	401 105 5400	MT-GLAZE 47K JA 1/16W	R228	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R162	401 105 0504	MT-GLAZE 1K JA 1/16W	R2304	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R163	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R2305	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R164	401 105 5202	MT-GLAZE 470 JA 1/16W	R2306	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R165	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1804	401 105 0603	MT-GLAZE 10K JA 1/16W	R2311	401 105 0405	MT-GLAZE 100 JA 1/16W
R1805	401 105 0603	MT-GLAZE 10K JA 1/16W	R2312	401 105 0405	MT-GLAZE 100 JA 1/16W
R1806	401 105 0405	MT-GLAZE 100 JA 1/16W	R2313	401 105 0405	MT-GLAZE 100 JA 1/16W
R1807	401 105 0405	MT-GLAZE 100 JA 1/16W	R2319	401 105 0504	MT-GLAZE 1K JA 1/16W
R1810	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2320	401 105 0405	MT-GLAZE 100 JA 1/16W
R1811	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2321	401 105 0504	MT-GLAZE 1K JA 1/16W
R1812	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2322	401 105 1105	MT-GLAZE 12K JA 1/16W
R1813	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2323	401 219 1008	MT-GLAZE 1.6K FA 1/16W
R1814	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2324	401 105 0603	MT-GLAZE 10K JA 1/16W
R1816	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2325	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1817	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2326	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1823	401 105 0603	MT-GLAZE 10K JA 1/16W	R233	401 105 3901	MT-GLAZE 33 JA 1/16W
R1833	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2331	401 105 0306	MT-GLAZE 10 JA 1/16W
R1834	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2332	401 105 0306	MT-GLAZE 10 JA 1/16W
R1836	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2333	401 105 0306	MT-GLAZE 10 JA 1/16W
R1871	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2334	401 105 0504	MT-GLAZE 1K JA 1/16W
R1872	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2336	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1876	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2339	401 105 0306	MT-GLAZE 10 JA 1/16W
R1877	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2341	401 105 0603	MT-GLAZE 10K JA 1/16W
R1881	401 105 0603	MT-GLAZE 10K JA 1/16W	R2342	401 105 0603	MT-GLAZE 10K JA 1/16W
R1882	401 105 0603	MT-GLAZE 10K JA 1/16W	R2344	401 105 0603	MT-GLAZE 10K JA 1/16W
R1883	401 105 0603	MT-GLAZE 10K JA 1/16W	R2345	401 105 0504	MT-GLAZE 1K JA 1/16W
R1884	401 105 0603	MT-GLAZE 10K JA 1/16W	R2346	401 105 0504	MT-GLAZE 1K JA 1/16W
R1886	401 105 0603	MT-GLAZE 10K JA 1/16W	R2347	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1887	401 105 0603	MT-GLAZE 10K JA 1/16W	R2348	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1888	401 105 0603	MT-GLAZE 10K JA 1/16W	R2349	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1891	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R235	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1892	401 105 0405	MT-GLAZE 100 JA 1/16W	R2352	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1893	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R2354	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1894	401 105 0405	MT-GLAZE 100 JA 1/16W	R2356	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R201	401 105 7206	MT-GLAZE 82 JA 1/16W	R2361	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R202	401 113 4402	MT-GLAZE 75 JA 1/16W	R2362	401 105 5202	MT-GLAZE 470 JA 1/16W
R203	401 105 7206	MT-GLAZE 82 JA 1/16W	R2369	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R204	401 113 4402	MT-GLAZE 75 JA 1/16W	R2370	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R205	401 105 7206	MT-GLAZE 82 JA 1/16W	R2371	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R206	401 113 4402	MT-GLAZE 75 JA 1/16W	R2372	401 105 0405	MT-GLAZE 100 JA 1/16W
R207	401 105 0405	MT-GLAZE 100 JA 1/16W	R2373	401 105 0405	MT-GLAZE 100 JA 1/16W
R208	401 105 0603	MT-GLAZE 10K JA 1/16W	R2374	401 105 0405	MT-GLAZE 100 JA 1/16W
R209	401 105 0405	MT-GLAZE 100 JA 1/16W	R2380	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R210	401 105 0603	MT-GLAZE 10K JA 1/16W	R2382	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2101	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R2383	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2102	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R2387	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2103	401 105 0405	MT-GLAZE 100 JA 1/16W	R2388	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2104	401 105 0405	MT-GLAZE 100 JA 1/16W	R2390	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2106	401 105 4007	MT-GLAZE 330 JA 1/16W	R2392	401 105 0504	MT-GLAZE 1K JA 1/16W
R2107	401 105 0504	MT-GLAZE 1K JA 1/16W	R2393	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2108	401 105 0504	MT-GLAZE 1K JA 1/16W	R2394	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2109	401 105 0504	MT-GLAZE 1K JA 1/16W	R2395	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R211	401 105 0405	MT-GLAZE 100 JA 1/16W	R2397	401 105 0306	MT-GLAZE 10 JA 1/16W
R2111	401 105 0504	MT-GLAZE 1K JA 1/16W	R2501	401 148 6006	MT-GLAZE 2.2 JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R2502	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3131	401 105 3406	MT-GLAZE 27K JA 1/16W
R2503	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3132	401 105 7503	MT-GLAZE 82K JA 1/16W
R2504	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3133	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R2506	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R3134	401 105 0504	MT-GLAZE 1K JA 1/16W
R2507	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R3136	401 105 0504	MT-GLAZE 1K JA 1/16W
R2508	401 105 4700	MT-GLAZE 39K JA 1/16W	R3137	401 105 0405	MT-GLAZE 100 JA 1/16W
R2509	401 105 0504	MT-GLAZE 1K JA 1/16W	R3139	401 105 0504	MT-GLAZE 1K JA 1/16W
R2511	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R314	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2512	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3141	401 105 5905	MT-GLAZE 560 JA 1/16W
R2513	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3142	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R2514	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3143	401 105 0504	MT-GLAZE 1K JA 1/16W
R2516	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R3144	401 105 5905	MT-GLAZE 560 JA 1/16W
R2517	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R3145	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R2518	401 105 4700	MT-GLAZE 39K JA 1/16W	R3146	401 105 0504	MT-GLAZE 1K JA 1/16W
R2519	401 105 0504	MT-GLAZE 1K JA 1/16W	R3147	401 105 5905	MT-GLAZE 560 JA 1/16W
R2521	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3148	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R2522	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3149	401 105 0504	MT-GLAZE 1K JA 1/16W
R2523	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R315	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2524	401 148 6006	MT-GLAZE 2.2 JA 1/16W	R3151	401 105 0504	MT-GLAZE 1K JA 1/16W
R2526	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R3152	401 105 0504	MT-GLAZE 1K JA 1/16W
R2527	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R3153	401 105 0504	MT-GLAZE 1K JA 1/16W
R2528	401 105 4700	MT-GLAZE 39K JA 1/16W	R3154	401 105 0504	MT-GLAZE 1K JA 1/16W
R2529	401 105 0504	MT-GLAZE 1K JA 1/16W	R3155	401 105 0504	MT-GLAZE 1K JA 1/16W
R260	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3156	401 105 0504	MT-GLAZE 1K JA 1/16W
R261	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R316	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R262	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3160	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R272	401 105 0405	MT-GLAZE 100 JA 1/16W	R3161	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R274	401 105 0405	MT-GLAZE 100 JA 1/16W	R317	401 105 0306	MT-GLAZE 10 JA 1/16W
R277	401 105 0405	MT-GLAZE 100 JA 1/16W	R318	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R278	401 105 0405	MT-GLAZE 100 JA 1/16W	R320	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R279	401 105 0306	MT-GLAZE 10 JA 1/16W	R3211	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R282	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3212	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R283	401 105 0306	MT-GLAZE 10 JA 1/16W	R3213	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R286	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R3214	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R287	401 105 0603	MT-GLAZE 10K JA 1/16W	R322	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R288	401 105 0405	MT-GLAZE 100 JA 1/16W	R3221	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R289	401 105 0405	MT-GLAZE 100 JA 1/16W	R3222	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R291	401 105 0405	MT-GLAZE 100 JA 1/16W	R3223	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R292	401 105 0405	MT-GLAZE 100 JA 1/16W	R3224	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R293	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R3225TM	401 024 7004	CARBON 1K JA 1/6W
R294	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R3228	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R301	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3239	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R304	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3241	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R308	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3242	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3101	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3243	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3102	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R326	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3104	401 105 0405	MT-GLAZE 100 JA 1/16W	R327	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3106	401 105 0405	MT-GLAZE 100 JA 1/16W	R328	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3107	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R330	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3108	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R332	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R311	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R333	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3111	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R334	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3112	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R336	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3113	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R337	401 105 0603	MT-GLAZE 10K JA 1/16W
R3114	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R338	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3116	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R341	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3117	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R342	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3118	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R343	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3119	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R344	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R312	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R345	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3121	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3501	401 105 0405	MT-GLAZE 100 JA 1/16W
R3122	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3502	401 105 0405	MT-GLAZE 100 JA 1/16W
R3123	401 105 1600	MT-GLAZE 15K JA 1/16W	R3503	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3124	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3506	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3128	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R351	401 105 0405	MT-GLAZE 100 JA 1/16W
R3129	401 177 2406	MT-GLAZE 10M JA 1/16W	R352	401 105 0603	MT-GLAZE 10K JA 1/16W
R313	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R354	401 105 7909	MT-GLAZE 0.000 ZA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R3551	401 105 0405	MT-GLAZE 100 JA 1/16W	R3666	401 105 0306	MT-GLAZE 10 JA 1/16W
R3552	401 105 0405	MT-GLAZE 100 JA 1/16W	R3667	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3554	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3668	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3555	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3669	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3556	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3672	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3557	401 105 0405	MT-GLAZE 100 JA 1/16W	R3673	401 105 0504	MT-GLAZE 1K JA 1/16W
R356	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3676	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3561	401 105 0504	MT-GLAZE 1K JA 1/16W	R3678	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3562	401 105 0504	MT-GLAZE 1K JA 1/16W	R368	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3563	401 105 0405	MT-GLAZE 100 JA 1/16W	R3681	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3564	401 105 0405	MT-GLAZE 100 JA 1/16W	R3682	401 105 0504	MT-GLAZE 1K JA 1/16W
R3571	401 105 0603	MT-GLAZE 10K JA 1/16W	R369	401 105 0603	MT-GLAZE 10K JA 1/16W
R3572	401 105 0603	MT-GLAZE 10K JA 1/16W	R370	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3573	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R371	401 105 0603	MT-GLAZE 10K JA 1/16W
R3574	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R373	401 105 0603	MT-GLAZE 10K JA 1/16W
R358	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R375	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R359	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R376	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3601	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R379	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3602	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R382	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3603	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R383	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3604	401 105 0603	MT-GLAZE 10K JA 1/16W	R387	401 105 0603	MT-GLAZE 10K JA 1/16W
R361	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R389	401 038 3504	MT-GLAZE 330 JA 1/10W
R3611	401 105 0306	MT-GLAZE 10 JA 1/16W	R392	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3612	401 105 0306	MT-GLAZE 10 JA 1/16W	R394	401 105 0603	MT-GLAZE 10K JA 1/16W
R3613	401 105 0306	MT-GLAZE 10 JA 1/16W	R396	401 105 0603	MT-GLAZE 10K JA 1/16W
R3614	401 105 0306	MT-GLAZE 10 JA 1/16W	R398	401 105 0603	MT-GLAZE 10K JA 1/16W
R3616	401 105 0306	MT-GLAZE 10 JA 1/16W	R4001	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R3617	401 105 0306	MT-GLAZE 10 JA 1/16W	R4002	401 202 4009	MT-GLAZE 10K FA 1/16W
R3618	401 105 0306	MT-GLAZE 10 JA 1/16W	R4003	401 105 0405	MT-GLAZE 100 JA 1/16W
R3619	401 105 0306	MT-GLAZE 10 JA 1/16W	R4004	401 105 0405	MT-GLAZE 100 JA 1/16W
R362	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4005	401 105 7305	MT-GLAZE 820 JA 1/16W
R3621	401 105 0306	MT-GLAZE 10 JA 1/16W	R4006	401 105 7305	MT-GLAZE 820 JA 1/16W
R3622	401 105 0306	MT-GLAZE 10 JA 1/16W	R4007	401 105 7305	MT-GLAZE 820 JA 1/16W
R3623	401 105 0306	MT-GLAZE 10 JA 1/16W	R4008	401 105 0504	MT-GLAZE 1K JA 1/16W
R3624	401 105 0306	MT-GLAZE 10 JA 1/16W	R4009	401 105 0504	MT-GLAZE 1K JA 1/16W
R3626	401 105 0306	MT-GLAZE 10 JA 1/16W	R401	401 105 2607	MT-GLAZE 22 JA 1/16W
R3627	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4011	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3631	401 105 0306	MT-GLAZE 10 JA 1/16W	R4016	401 105 0405	MT-GLAZE 100 JA 1/16W
R3632	401 105 0306	MT-GLAZE 10 JA 1/16W	R4018	401 105 0405	MT-GLAZE 100 JA 1/16W
R3633	401 105 0306	MT-GLAZE 10 JA 1/16W	R402	401 105 2607	MT-GLAZE 22 JA 1/16W
R3634	401 105 0306	MT-GLAZE 10 JA 1/16W	R4021	401 105 0405	MT-GLAZE 100 JA 1/16W
R3636	401 105 0306	MT-GLAZE 10 JA 1/16W	R4023	401 105 0405	MT-GLAZE 100 JA 1/16W
R3637	401 105 0306	MT-GLAZE 10 JA 1/16W	R403	401 105 2607	MT-GLAZE 22 JA 1/16W
R3638	401 105 0306	MT-GLAZE 10 JA 1/16W	R4031	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3639	401 105 0306	MT-GLAZE 10 JA 1/16W	R4032	401 105 0504	MT-GLAZE 1K JA 1/16W
R364	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4033	401 105 8005	MT-GLAZE 1M JA 1/16W
R3641	401 105 0306	MT-GLAZE 10 JA 1/16W	R4034	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3642	401 105 0306	MT-GLAZE 10 JA 1/16W	R4035	401 105 0504	MT-GLAZE 1K JA 1/16W
R3643	401 105 0306	MT-GLAZE 10 JA 1/16W	R4036	401 105 8005	MT-GLAZE 1M JA 1/16W
R3644	401 105 0306	MT-GLAZE 10 JA 1/16W	R4037	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3646	401 105 0306	MT-GLAZE 10 JA 1/16W	R4038	401 105 0504	MT-GLAZE 1K JA 1/16W
R3647	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4039	401 105 8005	MT-GLAZE 1M JA 1/16W
R3648	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R404	401 105 2607	MT-GLAZE 22 JA 1/16W
R3649	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4041	401 105 5905	MT-GLAZE 560 JA 1/16W
R3651	401 105 0306	MT-GLAZE 10 JA 1/16W	R4042	401 105 0405	MT-GLAZE 100 JA 1/16W
R3652	401 105 0306	MT-GLAZE 10 JA 1/16W	R4043	401 105 0405	MT-GLAZE 100 JA 1/16W
R3653	401 105 0306	MT-GLAZE 10 JA 1/16W	R4044	401 105 0405	MT-GLAZE 100 JA 1/16W
R3654	401 105 0306	MT-GLAZE 10 JA 1/16W	R4046	401 105 0405	MT-GLAZE 100 JA 1/16W
R3656	401 105 0306	MT-GLAZE 10 JA 1/16W	R406	401 105 2607	MT-GLAZE 22 JA 1/16W
R3657	401 105 0306	MT-GLAZE 10 JA 1/16W	R407	401 105 2607	MT-GLAZE 22 JA 1/16W
R3658	401 105 0306	MT-GLAZE 10 JA 1/16W	R4072	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3659	401 105 0306	MT-GLAZE 10 JA 1/16W	R4073	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R366	401 105 0603	MT-GLAZE 10K JA 1/16W	R4074	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3661	401 105 0306	MT-GLAZE 10 JA 1/16W	R4076	401 105 5905	MT-GLAZE 560 JA 1/16W
R3662	401 105 0306	MT-GLAZE 10 JA 1/16W	R4077	401 105 5905	MT-GLAZE 560 JA 1/16W
R3663	401 105 0306	MT-GLAZE 10 JA 1/16W	R4078	401 105 5905	MT-GLAZE 560 JA 1/16W
R3664	401 105 0306	MT-GLAZE 10 JA 1/16W	R4079	401 105 7909	MT-GLAZE 0.000 ZA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R4081	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R439	401 105 3901	MT-GLAZE 33 JA 1/16W
R4082	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R441	401 105 0603	MT-GLAZE 10K JA 1/16W
R4087	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R442	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R411	401 105 3901	MT-GLAZE 33 JA 1/16W	R443	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R412	401 105 3901	MT-GLAZE 33 JA 1/16W	R444	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R413	401 105 3901	MT-GLAZE 33 JA 1/16W	R446	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R414	401 105 3901	MT-GLAZE 33 JA 1/16W	R447	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R416	401 105 3901	MT-GLAZE 33 JA 1/16W	R448	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R417	401 105 2607	MT-GLAZE 22 JA 1/16W	R449	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R418	401 105 2607	MT-GLAZE 22 JA 1/16W	R4500	401 105 0504	MT-GLAZE 1K JA 1/16W
R419	401 105 2607	MT-GLAZE 22 JA 1/16W	R4501	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4201	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R4502	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4202	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4503	401 114 0908	MT-GLAZE 3.3M JA 1/16W
R4204	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4504	401 105 0405	MT-GLAZE 100 JA 1/16W
R4205	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4505	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4207	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4506	401 203 9904	MT-GLAZE 4.7K FA 1/16W
R4208	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4508	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4209	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4509	401 105 0603	MT-GLAZE 10K JA 1/16W
R421	401 105 2607	MT-GLAZE 22 JA 1/16W	R451	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4211	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4512	401 105 0504	MT-GLAZE 1K JA 1/16W
R4213	401 105 0405	MT-GLAZE 100 JA 1/16W	R4513	401 105 0504	MT-GLAZE 1K JA 1/16W
R422	401 105 3901	MT-GLAZE 33 JA 1/16W	R4514	401 105 0405	MT-GLAZE 100 JA 1/16W
R423	401 105 3901	MT-GLAZE 33 JA 1/16W	R4515	401 105 0405	MT-GLAZE 100 JA 1/16W
R4231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4516	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4232	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4517	401 202 4009	MT-GLAZE 10K FA 1/16W
R4235	401 105 0405	MT-GLAZE 100 JA 1/16W	R4518	401 105 1600	MT-GLAZE 15K JA 1/16W
R4237	401 105 0306	MT-GLAZE 10 JA 1/16W	R4519	401 105 0405	MT-GLAZE 100 JA 1/16W
R424	401 105 3901	MT-GLAZE 33 JA 1/16W	R4521	401 105 1402	MT-GLAZE 150 JA 1/16W
R4241	401 105 0306	MT-GLAZE 10 JA 1/16W	R4522	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4243	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R4523	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4246	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R4525	401 105 0405	MT-GLAZE 100 JA 1/16W
R4248	401 113 4600	MT-GLAZE 110 JA 1/16W	R4526	401 105 0405	MT-GLAZE 100 JA 1/16W
R4251	401 113 4600	MT-GLAZE 110 JA 1/16W	R4528	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4252	401 105 0306	MT-GLAZE 10 JA 1/16W	R4529	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R4253	401 105 0306	MT-GLAZE 10 JA 1/16W	R4531	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4254	401 113 5003	MT-GLAZE 240 JA 1/16W	R4532	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R4256	401 113 5003	MT-GLAZE 240 JA 1/16W	R4533	401 105 0405	MT-GLAZE 100 JA 1/16W
R426	401 105 3901	MT-GLAZE 33 JA 1/16W	R4534	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4263	401 105 0306	MT-GLAZE 10 JA 1/16W	R4536	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4264	401 105 0306	MT-GLAZE 10 JA 1/16W	R4538	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4268	401 105 0306	MT-GLAZE 10 JA 1/16W	R4540	401 105 0405	MT-GLAZE 100 JA 1/16W
R4269	401 105 0306	MT-GLAZE 10 JA 1/16W	R4541	401 105 0603	MT-GLAZE 10K JA 1/16W
R427	401 105 3901	MT-GLAZE 33 JA 1/16W	R4542	401 105 4205	MT-GLAZE 33K JA 1/16W
R4274	401 105 0306	MT-GLAZE 10 JA 1/16W	R4544	401 105 0405	MT-GLAZE 100 JA 1/16W
R4275	401 105 0306	MT-GLAZE 10 JA 1/16W	R4545	401 105 0405	MT-GLAZE 100 JA 1/16W
R428	401 105 2607	MT-GLAZE 22 JA 1/16W	R4546	401 105 0405	MT-GLAZE 100 JA 1/16W
R4281	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4547	401 105 0603	MT-GLAZE 10K JA 1/16W
R4282	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4548	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R4283	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4549	401 105 0603	MT-GLAZE 10K JA 1/16W
R4284	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4550	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R4285	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4553	401 105 3901	MT-GLAZE 33 JA 1/16W
R4286	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4555	401 105 0504	MT-GLAZE 1K JA 1/16W
R4287	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4559	401 105 3901	MT-GLAZE 33 JA 1/16W
R4288	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4562	401 105 0504	MT-GLAZE 1K JA 1/16W
R4289	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4566	401 105 3901	MT-GLAZE 33 JA 1/16W
R429	401 105 2607	MT-GLAZE 22 JA 1/16W	R4568	401 105 0504	MT-GLAZE 1K JA 1/16W
R4292	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4571	401 105 0405	MT-GLAZE 100 JA 1/16W
R4293	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4572	401 113 6802	MT-GLAZE 11K JA 1/16W
R4295	401 105 0405	MT-GLAZE 100 JA 1/16W	R4573	401 113 6802	MT-GLAZE 11K JA 1/16W
R4296	401 105 0405	MT-GLAZE 100 JA 1/16W	R4574	401 105 0405	MT-GLAZE 100 JA 1/16W
R431	401 105 3901	MT-GLAZE 33 JA 1/16W	R4575	401 113 6802	MT-GLAZE 11K JA 1/16W
R432	401 105 3901	MT-GLAZE 33 JA 1/16W	R4576	401 113 6802	MT-GLAZE 11K JA 1/16W
R433	401 105 3901	MT-GLAZE 33 JA 1/16W	R4577	401 105 0405	MT-GLAZE 100 JA 1/16W
R434	401 105 3901	MT-GLAZE 33 JA 1/16W	R4578	401 113 6802	MT-GLAZE 11K JA 1/16W
R436	401 105 3901	MT-GLAZE 33 JA 1/16W	R4579	401 113 6802	MT-GLAZE 11K JA 1/16W
R437	401 105 3901	MT-GLAZE 33 JA 1/16W	R4581	401 105 0504	MT-GLAZE 1K JA 1/16W
R438	401 105 3901	MT-GLAZE 33 JA 1/16W	R4582	401 105 0504	MT-GLAZE 1K JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R4583	401 105 0504	MT-GLAZE 1K JA 1/16W	R4823	401 105 4502	MT-GLAZE 390 JA 1/16W
R4584	401 105 5905	MT-GLAZE 560 JA 1/16W	R4824	401 105 4502	MT-GLAZE 390 JA 1/16W
R4585	401 105 0603	MT-GLAZE 10K JA 1/16W	R4825	401 105 4502	MT-GLAZE 390 JA 1/16W
R4586	401 105 7305	MT-GLAZE 820 JA 1/16W	R4826	401 105 2904	MT-GLAZE 22K JA 1/16W
R4588	401 105 7404	MT-GLAZE 8.2K JA 1/16W	R4827	401 105 2904	MT-GLAZE 22K JA 1/16W
R4589	401 105 0504	MT-GLAZE 1K JA 1/16W	R4828	401 105 0405	MT-GLAZE 100 JA 1/16W
R4591	401 105 7305	MT-GLAZE 820 JA 1/16W	R4829	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4592	401 105 0504	MT-GLAZE 1K JA 1/16W	R483	401 105 3901	MT-GLAZE 33 JA 1/16W
R4593	401 105 0603	MT-GLAZE 10K JA 1/16W	R4831	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4594	401 105 6001	MT-GLAZE 5.6K JA 1/16W	R4834	401 105 0603	MT-GLAZE 10K JA 1/16W
R4597	401 105 5905	MT-GLAZE 560 JA 1/16W	R4836	401 105 0603	MT-GLAZE 10K JA 1/16W
R4598	401 105 5905	MT-GLAZE 560 JA 1/16W	R4838	401 036 1403	MT-GLAZE 220 JA 1/8W
R4599	401 105 5905	MT-GLAZE 560 JA 1/16W	R484	401 105 3901	MT-GLAZE 33 JA 1/16W
R4601	401 105 5905	MT-GLAZE 560 JA 1/16W	R4844	401 105 0306	MT-GLAZE 10 JA 1/16W
R4602	401 105 1402	MT-GLAZE 150 JA 1/16W	R4845	401 105 0306	MT-GLAZE 10 JA 1/16W
R4603	401 105 5905	MT-GLAZE 560 JA 1/16W	R4847	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4604	401 105 1402	MT-GLAZE 150 JA 1/16W	R4849	401 105 0405	MT-GLAZE 100 JA 1/16W
R4606	401 105 5905	MT-GLAZE 560 JA 1/16W	R4851	401 105 0405	MT-GLAZE 100 JA 1/16W
R4607	401 105 0504	MT-GLAZE 1K JA 1/16W	R4852	401 105 0405	MT-GLAZE 100 JA 1/16W
R4608	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R4853	401 105 0405	MT-GLAZE 100 JA 1/16W
R4609	401 105 1402	MT-GLAZE 150 JA 1/16W	R4855	401 105 2904	MT-GLAZE 22K JA 1/16W
R461	401 105 3901	MT-GLAZE 33 JA 1/16W	R4856	401 105 2904	MT-GLAZE 22K JA 1/16W
R4611	401 105 5905	MT-GLAZE 560 JA 1/16W	R4857	401 105 0405	MT-GLAZE 100 JA 1/16W
R4612	401 105 5905	MT-GLAZE 560 JA 1/16W	R4858	401 105 0405	MT-GLAZE 100 JA 1/16W
R4613	401 105 0504	MT-GLAZE 1K JA 1/16W	R4859	401 105 0603	MT-GLAZE 10K JA 1/16W
R4614	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R486	401 105 3901	MT-GLAZE 33 JA 1/16W
R4616	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R4861	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4617	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R4862	401 038 7601	MT-GLAZE 560 JA 1/10W
R462	401 105 3901	MT-GLAZE 33 JA 1/16W	R4863	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R463	401 105 3901	MT-GLAZE 33 JA 1/16W	R4866	401 105 0603	MT-GLAZE 10K JA 1/16W
R464	401 105 3901	MT-GLAZE 33 JA 1/16W	R4871	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R466	401 105 3901	MT-GLAZE 33 JA 1/16W	R4872	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R467	401 105 3901	MT-GLAZE 33 JA 1/16W	R4873	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R468	401 105 3901	MT-GLAZE 33 JA 1/16W	R4874	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R469	401 105 3901	MT-GLAZE 33 JA 1/16W	R4877	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R471	401 105 3901	MT-GLAZE 33 JA 1/16W	R4878	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4711	401 105 0405	MT-GLAZE 100 JA 1/16W	R4879	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4712	401 105 0405	MT-GLAZE 100 JA 1/16W	R4882	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R472	401 105 3901	MT-GLAZE 33 JA 1/16W	R492	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4724	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R494	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R473	401 105 3901	MT-GLAZE 33 JA 1/16W	R501	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4734	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R504	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R474	401 105 3901	MT-GLAZE 33 JA 1/16W	R511	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4744	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R512	401 105 3406	MT-GLAZE 27K JA 1/16W
R476	401 105 3901	MT-GLAZE 33 JA 1/16W	R513	401 105 0603	MT-GLAZE 10K JA 1/16W
R477	401 105 3901	MT-GLAZE 33 JA 1/16W	R514	401 113 6802	MT-GLAZE 11K JA 1/16W
R478	401 105 3901	MT-GLAZE 33 JA 1/16W	R531	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R479	401 105 3901	MT-GLAZE 33 JA 1/16W	R534	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4801	401 105 0603	MT-GLAZE 10K JA 1/16W	R541	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4802	401 105 0405	MT-GLAZE 100 JA 1/16W	R542	401 105 3406	MT-GLAZE 27K JA 1/16W
R4803	401 105 0603	MT-GLAZE 10K JA 1/16W	R543	401 105 0603	MT-GLAZE 10K JA 1/16W
R4804	401 105 0405	MT-GLAZE 100 JA 1/16W	R544	401 113 6802	MT-GLAZE 11K JA 1/16W
R4805	401 105 0603	MT-GLAZE 10K JA 1/16W	R561	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4806	401 105 0405	MT-GLAZE 100 JA 1/16W	R564	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4807	401 105 0504	MT-GLAZE 1K JA 1/16W	R571	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4808	401 105 0504	MT-GLAZE 1K JA 1/16W	R572	401 105 3406	MT-GLAZE 27K JA 1/16W
R4809	401 105 5202	MT-GLAZE 470 JA 1/16W	R573	401 105 0603	MT-GLAZE 10K JA 1/16W
R481	401 105 3901	MT-GLAZE 33 JA 1/16W	R574	401 113 6802	MT-GLAZE 11K JA 1/16W
R4811	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R581	401 105 0603	MT-GLAZE 10K JA 1/16W
R4812	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R582	401 105 0603	MT-GLAZE 10K JA 1/16W
R4814	401 105 0405	MT-GLAZE 100 JA 1/16W	R583	401 105 0603	MT-GLAZE 10K JA 1/16W
R4815	401 105 2904	MT-GLAZE 22K JA 1/16W	R584	401 105 0603	MT-GLAZE 10K JA 1/16W
R4816	401 105 5202	MT-GLAZE 470 JA 1/16W	R586	401 105 0603	MT-GLAZE 10K JA 1/16W
R4817	401 105 0405	MT-GLAZE 100 JA 1/16W	R587	401 105 0603	MT-GLAZE 10K JA 1/16W
R4818	401 105 6001	MT-GLAZE 5.6K JA 1/16W	R8001	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R482	401 105 3901	MT-GLAZE 33 JA 1/16W	R8002	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4822	401 105 0603	MT-GLAZE 10K JA 1/16W	R8003	401 105 4007	MT-GLAZE 330 JA 1/16W



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Key No.	Part No.	Description	Key No.	Part No.	Description
R8004	401 105 3109	MT-GLAZE 27 JA 1/16W	R863	401 105 0603	MT-GLAZE 10K JA 1/16W
R8005	401 105 4205	MT-GLAZE 33K JA 1/16W	R864	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R8006	401 105 4205	MT-GLAZE 33K JA 1/16W	R865	401 105 0603	MT-GLAZE 10K JA 1/16W
R8008	401 105 4205	MT-GLAZE 33K JA 1/16W	R866	401 105 0405	MT-GLAZE 100 JA 1/16W
R8009	401 105 4205	MT-GLAZE 33K JA 1/16W	R867	401 105 0405	MT-GLAZE 100 JA 1/16W
R801	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R868	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8010	401 105 4205	MT-GLAZE 33K JA 1/16W	R869	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8011	401 105 4205	MT-GLAZE 33K JA 1/16W	R870	401 105 0504	MT-GLAZE 1K JA 1/16W
R8013	401 105 4205	MT-GLAZE 33K JA 1/16W	R871	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8015	401 113 6406	MT-GLAZE 5.1K JA 1/16W	R872	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8016	401 113 6406	MT-GLAZE 5.1K JA 1/16W	R873	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8018	401 113 6406	MT-GLAZE 5.1K JA 1/16W	R874	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R802	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R875	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8020	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R876	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R803	401 105 0405	MT-GLAZE 100 JA 1/16W	R877	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8031	401 105 0405	MT-GLAZE 100 JA 1/16W	R878	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8032	401 105 0405	MT-GLAZE 100 JA 1/16W	R879	401 105 0603	MT-GLAZE 10K JA 1/16W
R8033	401 105 0603	MT-GLAZE 10K JA 1/16W	R880	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8034	401 105 0603	MT-GLAZE 10K JA 1/16W	R881	401 105 0603	MT-GLAZE 10K JA 1/16W
R8036	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R882	401 105 0603	MT-GLAZE 10K JA 1/16W
R8037	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R883	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8039	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R884	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R804	401 105 0405	MT-GLAZE 100 JA 1/16W	R885	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R806	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R886	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R808	401 105 0405	MT-GLAZE 100 JA 1/16W	R887	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R809	401 105 0405	MT-GLAZE 100 JA 1/16W	R889	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R810	401 105 0405	MT-GLAZE 100 JA 1/16W	R890	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R811	401 105 0603	MT-GLAZE 10K JA 1/16W	R891	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R812	401 105 0603	MT-GLAZE 10K JA 1/16W	R892	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R813	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R893	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R815	401 105 0405	MT-GLAZE 100 JA 1/16W	R894	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R816	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R895	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R817	401 105 0405	MT-GLAZE 100 JA 1/16W	R896	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R818	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R897	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R819	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R898	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R820	401 105 0405	MT-GLAZE 100 JA 1/16W	R899	401 105 0603	MT-GLAZE 10K JA 1/16W
R821	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9401	401 105 0603	MT-GLAZE 10K JA 1/16W
R822	401 105 0603	MT-GLAZE 10K JA 1/16W	R9402	401 105 0603	MT-GLAZE 10K JA 1/16W
R823	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9407	401 105 0603	MT-GLAZE 10K JA 1/16W
R824	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R9408	401 105 0603	MT-GLAZE 10K JA 1/16W
R825	401 105 4502	MT-GLAZE 390 JA 1/16W	R9409	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R826	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R9410	401 105 0603	MT-GLAZE 10K JA 1/16W
R827	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9413	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R828	401 105 2904	MT-GLAZE 22K JA 1/16W	R9414	401 105 0306	MT-GLAZE 10 JA 1/16W
R829	401 105 2904	MT-GLAZE 22K JA 1/16W	R9419	401 105 0603	MT-GLAZE 10K JA 1/16W
R831	401 105 0900	MT-GLAZE 120 JA 1/16W	R9421	401 105 0603	MT-GLAZE 10K JA 1/16W
R832	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R9422	401 105 0603	MT-GLAZE 10K JA 1/16W
R833	401 105 0603	MT-GLAZE 10K JA 1/16W	R9423	401 105 0603	MT-GLAZE 10K JA 1/16W
R834	401 105 0603	MT-GLAZE 10K JA 1/16W	R9426	401 105 0603	MT-GLAZE 10K JA 1/16W
R835	401 105 0603	MT-GLAZE 10K JA 1/16W	R9427	401 105 0603	MT-GLAZE 10K JA 1/16W
R836	401 105 0603	MT-GLAZE 10K JA 1/16W	R9429	401 105 0603	MT-GLAZE 10K JA 1/16W
R837	401 105 0603	MT-GLAZE 10K JA 1/16W	R9431	401 105 0603	MT-GLAZE 10K JA 1/16W
R838	401 105 0603	MT-GLAZE 10K JA 1/16W	R9432	401 105 0306	MT-GLAZE 10 JA 1/16W
R839	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9433	401 105 0405	MT-GLAZE 100 JA 1/16W
R841	401 105 8203	MT-GLAZE 68K JA 1/16W	R9434	401 105 1907	MT-GLAZE 180 JA 1/16W
R844	401 105 0405	MT-GLAZE 100 JA 1/16W	R9436	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R846	401 105 0603	MT-GLAZE 10K JA 1/16W	R9437	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R848	401 105 2904	MT-GLAZE 22K JA 1/16W	R9438	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R849	401 105 2904	MT-GLAZE 22K JA 1/16W	R9439	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R850	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9441	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R851	401 105 2904	MT-GLAZE 22K JA 1/16W	R9442	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R854	401 105 0603	MT-GLAZE 10K JA 1/16W	R9444	401 105 0603	MT-GLAZE 10K JA 1/16W
R855	401 105 0405	MT-GLAZE 100 JA 1/16W	R9445	401 105 0603	MT-GLAZE 10K JA 1/16W
R856	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R9446	401 105 0603	MT-GLAZE 10K JA 1/16W
R857	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R9449	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R858	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9450	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R861	401 105 0603	MT-GLAZE 10K JA 1/16W	R9451	401 105 0306	MT-GLAZE 10 JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R9452	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9812	401 105 5400	MT-GLAZE 47K JA 1/16W
R9455	401 105 0603	MT-GLAZE 10K JA 1/16W	R9813	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9456	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9814	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9457	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9819	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9458	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9821	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9459	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9822	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9460	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9823	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9461	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R9824	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9463	401 105 0306	MT-GLAZE 10 JA 1/16W	R9825	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9464	401 105 0306	MT-GLAZE 10 JA 1/16W	R9826	401 105 0405	MT-GLAZE 100 JA 1/16W
R9467	401 105 4007	MT-GLAZE 330 JA 1/16W	R9827	401 105 0504	MT-GLAZE 1K JA 1/16W
R9468	401 105 0405	MT-GLAZE 100 JA 1/16W	R9829	401 105 0603	MT-GLAZE 10K JA 1/16W
R9469	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	<b>TRANSFORMER</b>		
R9471	401 105 0603	MT-GLAZE 10K JA 1/16W	T1151	645 044 3626	FILTER, LP 7MHZ
R9472	401 105 0603	MT-GLAZE 10K JA 1/16W	T1161	645 044 3626	FILTER, LP 7MHZ
R9473	401 105 0603	MT-GLAZE 10K JA 1/16W	T161	645 044 3626	FILTER, LP 7MHZ
R9474	401 105 0603	MT-GLAZE 10K JA 1/16W	<b>COIL</b>		
R9476	401 105 0603	MT-GLAZE 10K JA 1/16W	L1101	645 026 0964	INDUCTOR, 10U K
R9477	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L1102	645 026 0964	INDUCTOR, 10U K
R9478	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L1103	645 026 0964	INDUCTOR, 10U K
R9479	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L1104	645 026 0971	INDUCTOR, 15U K
R9481	401 105 0603	MT-GLAZE 10K JA 1/16W	L1105	645 026 0964	INDUCTOR, 10U K
R9482	401 105 0603	MT-GLAZE 10K JA 1/16W	L1151	645 026 1008	INDUCTOR, 3.3U M
R9483	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L1161	645 026 0964	INDUCTOR, 10U K
R9484	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L1501	645 020 1776	INDUCTOR, 3.3U M
R9486	401 105 0603	MT-GLAZE 10K JA 1/16W	L1502	645 020 1776	INDUCTOR, 3.3U M
R9487	401 105 4007	MT-GLAZE 330 JA 1/16W	L1531	645 020 1776	INDUCTOR, 3.3U M
R9488	401 105 0405	MT-GLAZE 100 JA 1/16W	L1532	645 020 1776	INDUCTOR, 3.3U M
R9501	401 105 0603	MT-GLAZE 10K JA 1/16W	L1561	645 020 1776	INDUCTOR, 3.3U M
R9502	401 105 0603	MT-GLAZE 10K JA 1/16W	L1562	645 020 1776	INDUCTOR, 3.3U M
R9503	401 105 0603	MT-GLAZE 10K JA 1/16W	L201	645 020 1776	INDUCTOR, 3.3U M
R9504	401 105 0603	MT-GLAZE 10K JA 1/16W	L202	645 020 1776	INDUCTOR, 3.3U M
R9506	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L2101	645 021 1669	INDUCTOR, 22U J
R9507	401 105 0603	MT-GLAZE 10K JA 1/16W	L2102	645 021 1737	INDUCTOR, 47U J
R9509	401 105 0405	MT-GLAZE 100 JA 1/16W	L2103	645 021 1737	INDUCTOR, 47U J
R9510	401 105 0603	MT-GLAZE 10K JA 1/16W	L2116	645 017 4520	INDUCTOR, 100U J
R9511	401 105 0603	MT-GLAZE 10K JA 1/16W	L2381	645 026 1008	INDUCTOR, 3.3U M
R9512	401 105 0405	MT-GLAZE 100 JA 1/16W	L241	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R9513	401 105 0603	MT-GLAZE 10K JA 1/16W	L2591	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R9514	401 105 0603	MT-GLAZE 10K JA 1/16W	L3101	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R9516	401 105 0405	MT-GLAZE 100 JA 1/16W	L3102	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R9517	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3103	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R9518	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3211	645 020 1776	INDUCTOR, 3.3U M
R9520	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3221	645 020 1776	INDUCTOR, 3.3U M
R9521	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3501	645 026 1008	INDUCTOR, 3.3U M
R9522	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3551	645 026 1008	INDUCTOR, 3.3U M
R9523	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L3601	401 035 4306	MT-GLAZE 10 JA 1/8W
R9524	401 105 0603	MT-GLAZE 10K JA 1/16W	L3611	645 020 1776	INDUCTOR, 3.3U M
R9526	401 105 0405	MT-GLAZE 100 JA 1/16W	L3631	645 020 1776	INDUCTOR, 3.3U M
R9527	401 105 0405	MT-GLAZE 100 JA 1/16W	L3651	645 020 1776	INDUCTOR, 3.3U M
R9528	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4001	645 026 0964	INDUCTOR, 10U K
R9529	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4002	645 026 0964	INDUCTOR, 10U K
R9530	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4003	645 026 0964	INDUCTOR, 10U K
R9531	401 105 0603	MT-GLAZE 10K JA 1/16W	L4021	645 026 0964	INDUCTOR, 10U K
R9532	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4231	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R9533	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4501	645 026 0964	INDUCTOR, 10U K
R9534	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4502	645 026 0964	INDUCTOR, 10U K
R9542	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4541	645 026 0964	INDUCTOR, 10U K
R9546	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4551	645 026 0964	INDUCTOR, 10U K
R9551	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	L4554	645 021 1744	INDUCTOR, 5.6U J
R9801	401 105 1501	MT-GLAZE 1.5K JA 1/16W	L4556	645 021 1744	INDUCTOR, 5.6U J
R9803	401 105 8005	MT-GLAZE 1M JA 1/16W	L4557	645 021 1744	INDUCTOR, 5.6U J
R9804	401 105 0405	MT-GLAZE 100 JA 1/16W	L4558	645 026 0964	INDUCTOR, 10U K
R9805	401 105 0405	MT-GLAZE 100 JA 1/16W	L4581	645 026 0964	INDUCTOR, 10U K
R9806	401 105 0405	MT-GLAZE 100 JA 1/16W	L501	645 020 1776	INDUCTOR, 3.3U M
R9807	401 105 0405	MT-GLAZE 100 JA 1/16W	L502	645 020 1776	INDUCTOR, 3.3U M
R9808	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
L531	645 020 1776	INDUCTOR, 3.3U M	<b>TRANSISTOR</b>		
L532	645 020 1776	INDUCTOR, 3.3U M	Q601	405 161 9600	TR SPP20N60S5
L561	645 020 1776	INDUCTOR, 3.3U M	Q621	405 014 4509	TR 2SC2412K T146 R
L562	645 020 1776	INDUCTOR, 3.3U M	Q622	405 134 5905	TR 2SA1037AK-T146-R
L6301	645 001 4512	INDUCTOR, 10U K	Q623	405 014 4509	TR 2SC2412K T146 R
L8001	645 026 0988	INDUCTOR, 2.2U M	Q624	405 134 5905	TR 2SA1037AK-T146-R
L8002	645 026 0988	INDUCTOR, 2.2U M	Q681	405 014 4509	TR 2SC2412K T146 R
L8003	645 026 0988	INDUCTOR, 2.2U M	<b>INTEGRATED CIRCUIT</b>		
L8004	645 026 0988	INDUCTOR, 2.2U M	IC601	409 483 3803	IC FA5332M
L9801	645 021 1645	INDUCTOR, 2.2U J	IC651	409 421 4701	IC STR-Z2156
DIODE			IC681	409 344 6509	IC UPC1093T-E1
D1101	407 149 0807	DIODE 1SS355-TE-17	<b>CAPACITOR</b>		
D1102	407 149 0807	DIODE 1SS355-TE-17	C607	403 260 1600	MT-POLYEST 1U J 400V
D1103	407 149 0807	DIODE 1SS355-TE-17	C608	403 222 1303	CERAMIC 1000P K 1K
D234	407 149 0807	DIODE 1SS355-TE-17	C609	403 222 1303	CERAMIC 1000P K 1K
D235	407 149 0807	DIODE 1SS355-TE-17	C611	403 260 1600	MT-POLYEST 1U J 400V
D2351	407 149 0807	DIODE 1SS355-TE-17	C612	403 356 1804	ELECT 220U M 35V
D2352	407 149 0807	DIODE 1SS355-TE-17	C613	403 341 6104	ELECT 100U M 25V
D2353	407 149 0807	DIODE 1SS355-TE-17	C614	403 341 6104	ELECT 100U M 25V
D236	407 149 0807	DIODE 1SS355-TE-17	C616	404 085 9901	ELECT 270U M 450V
D2392	407 149 0807	DIODE 1SS355-TE-17	C618	403 323 8706	MT-POLYEST 0.047U K 450V
D3101	407 149 0807	DIODE 1SS355-TE-17	C621	403 215 2904	CERAMIC 0.022U K 25V
D3102	407 149 0807	DIODE 1SS355-TE-17	C622	403 157 6800	CERAMIC 680P K 50V
D3501	407 149 0807	DIODE 1SS355-TE-17	C623	403 215 2201	CERAMIC 0.01U K 50V
D3571	407 149 0807	DIODE 1SS355-TE-17	C624	403 338 0207	CERAMIC 0.068U Z 50V
D3601	407 149 0807	DIODE 1SS355-TE-17	C626	403 164 0204	CERAMIC 0.1U Z 25V
D4054	407 149 0807	DIODE 1SS355-TE-17	C627	403 164 0204	CERAMIC 0.1U Z 25V
D4291	407 149 0807	DIODE 1SS355-TE-17	C628	403 157 3304	CERAMIC 68P J 50V
D451	407 149 0807	DIODE 1SS355-TE-17	C629	403 157 6602	CERAMIC 470P K 50V
D4801	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C631	403 281 5007	CERAMIC 0.033U K 25V
D4802	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C632	403 164 0204	CERAMIC 0.1U Z 25V
D4803	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C633	403 164 0204	CERAMIC 0.1U Z 25V
D4804	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C634	403 164 0204	CERAMIC 0.1U Z 25V
D4805	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C636	403 323 8706	MT-POLYEST 0.047U K 450V
D4806	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C651	403 162 6604	ELECT 2.2U M 50V
D4807	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C652	403 237 7901	MT-COMPO 0.22U J 50V
D4808	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	C653	403 113 3805	CERAMIC 1000P K 50V
D4809	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	C654	403 247 3306	CERAMIC 330P K 2K
D4811	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	C656	403 164 0204	CERAMIC 0.1U Z 25V
D4812	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	C657	403 218 8804	CERAMIC 220P K 2K
D4813	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	C658	403 083 4307	POLYPRO 0.022U J 400V
D4814	407 149 0807	DIODE 1SS355-TE-17	C659	403 157 6800	CERAMIC 680P K 50V
D4816	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	C661	403 162 6208	ELECT 1U M 50V
D8001	407 149 0807	DIODE 1SS355-TE-17	C662	403 356 1804	ELECT 220U M 35V
D801	407 149 0807	DIODE 1SS355-TE-17	C663	403 164 0204	CERAMIC 0.1U Z 25V
D8031	407 149 0807	DIODE 1SS355-TE-17	C664	403 281 5205	CERAMIC 0.22U Z 16V
D8032	407 149 0807	DIODE 1SS355-TE-17	C681	403 355 9504	ELECT 4700U M 25V
D9551	407 149 0807	DIODE 1SS355-TE-17	C682	403 164 0204	CERAMIC 0.1U Z 25V
<b>MISCELLANEOUS</b>			C683	403 368 8808	ELECT 4700U M 10V
X1101	645 045 9122	OSC, CRYSTAL 20MHZ	C684	403 164 0204	CERAMIC 0.1U Z 25V
X3101	645 047 1568	OSC, CRYSTAL 16.200MHZ	C685	403 325 8605	ELECT 220U M 16V
X361	645 047 6587	OSC, CRYSTAL 26.000MHZ	C686	403 323 1301	CERAMIC 0.47U Z 10V
X362	645 050 2323	OSC, CRYSTAL 25.000MHZ	C688	403 164 0204	CERAMIC 0.1U Z 25V
X4001	645 041 3841	OSC, CRYSTAL 4MHZ	C689	403 325 8506	ELECT 1000U M 16V
X4502	645 047 2794	OSC, CERAMIC 2.696MHZ	C692	403 323 8805	CERAMIC 2.2U Z 16V
X801	645 053 4973	OSC, CRYSTAL 6.4512MHZ	<b>RESISTOR</b>		
X9801	645 035 8906	OSC, CRYSTAL 48MHZ	R602	401 242 3901	MT-GLAZE 240K JA 1/2W
<b>POWER BOARD</b>			R603	401 242 3901	MT-GLAZE 240K JA 1/2W
<b>610 298 5344 ASSY,PWB,POWER M4LA</b>			R604	401 258 8204	MT-GLAZE 680 JA 1/3W
<b>1AA0B10C3750A</b>			R606	402 080 8806	MT-GLAZE 680 KA 1W
			R607	401 237 0007	MT-GLAZE 47K JA 1W
			R608	401 237 0007	MT-GLAZE 47K JA 1W
			R609	401 237 0007	MT-GLAZE 47K JA 1W
			R610	401 237 0007	MT-GLAZE 47K JA 1W
			R611	401 237 0007	MT-GLAZE 47K JA 1W

## Electrical Parts List

Key No.      Part No.      Description						Key No.      Part No.      Description					
R612	401	237	0007	MT-GLAZE	47K JA 1W	TSW601	645	027	4145	SWITCH, THERMAL	
R613	402	087	9905	RESISTER	0.12 KA 2W		645	031	0256	THERMOSTATS	
R614	402	087	9905	RESISTER	0.12 KA 2W	T601	645	043	5089	INDUCTOR, 850U	
R615	401	105	0405	MT-GLAZE	100 JA 1/16W	△ T651	645	028	0641	TRANS, POWER, PULSE	
R616	401	105	0504	MT-GLAZE	1K JA 1/16W	<b>COIL</b>					
R617	401	105	1600	MT-GLAZE	15K JA 1/16W	△ L603	645	052	6213	LINE FILTER	
R618	401	105	0306	MT-GLAZE	10 JA 1/16W	L651	645	020	1776	INDUCTOR, 3.3U M	
R620	401	105	0405	MT-GLAZE	100 JA 1/16W	L681	645	048	5381	INDUCTOR, 100U K	
R621	401	105	2607	MT-GLAZE	22 JA 1/16W	<b>DIODE</b>					
R622	401	217	4100	MT-GLAZE	22K FA 1/16W	DB601	408	045	4906	DIODE RBV-1506 LF-B	
R623	401	105	4304	MT-GLAZE	330K JA 1/16W		407	143	6003	DIODE RBV-1506	
R624	401	105	2607	MT-GLAZE	22 JA 1/16W	DS601	407	219	0805	THYRISTOR TF861S	
R626	401	105	4007	MT-GLAZE	330 JA 1/16W	DS602	407	219	0805	THYRISTOR TF861S	
R627	401	158	4108	MT-GLAZE	4.7 JA 1/16W	D601	407	190	4106	DIODE SFPL-52V	
R628	401	105	0405	MT-GLAZE	100 JA 1/16W	D602	407	190	4106	DIODE SFPL-52V	
R631	401	105	0603	MT-GLAZE	10K JA 1/16W	D603	407	149	6304	DIODE SFPB-54V	
R632	401	105	1501	MT-GLAZE	1.5K JA 1/16W	D604	407	191	3900	DIODE FML-G16S	
R633	401	105	5509	MT-GLAZE	470K JA 1/16W	D605	407	223	0808	ZENER DIODE 02DZ22Y (TPH3)	
R634	401	105	2201	MT-GLAZE	180K JA 1/16W	D606	407	149	0807	DIODE 1SS355-TE-17	
R635	401	105	0405	MT-GLAZE	100 JA 1/16W	D607	407	149	0807	DIODE 1SS355-TE-17	
R636	401	105	0504	MT-GLAZE	1K JA 1/16W	D608	407	149	0807	DIODE 1SS355-TE-17	
R637	401	218	4406	MT-GLAZE	1.2K FA 1/16W	D609	407	149	0807	DIODE 1SS355-TE-17	
R638	401	259	9002	MT-GLAZE	150K FA 1/2W	D611	407	223	1102	ZENER DIODE 02DZ6.2Y (TPH3)	
R639	401	259	9002	MT-GLAZE	150K FA 1/2W	D612	407	149	0807	DIODE 1SS355-TE-17	
R641	401	259	9002	MT-GLAZE	150K FA 1/2W	D614	407	149	0807	DIODE 1SS355-TE-17	
R642	401	259	9002	MT-GLAZE	150K FA 1/2W	D651	407	190	4106	DIODE SFPL-52V	
R643	401	105	2805	MT-GLAZE	2.2K JA 1/16W	D652	407	124	6800	DIODE AG01A	
R644	401	105	3307	MT-GLAZE	2.7K JA 1/16W	D653	407	223	0501	ZENER DIODE 02DZ12Y (TPH3)	
R646	401	105	1600	MT-GLAZE	15K JA 1/16W	D681	407	202	9808	DIODE FMB-26L	
R647	401	111	6309	MT-GLAZE	470 JA 1/2W	D682	407	202	9808	DIODE FMB-26L	
R648	401	111	6309	MT-GLAZE	470 JA 1/2W	D683	407	190	4106	DIODE SFPL-52V	
R650	401	105	5301	MT-GLAZE	4.7K JA 1/16W	D684	407	190	4106	DIODE SFPL-52V	
R651	401	237	0007	MT-GLAZE	47K JA 1W	D686	407	223	1102	ZENER DIODE 02DZ6.2Y (TPH3)	
R652	401	237	0007	MT-GLAZE	47K JA 1W	<b>MISCELLANEOUS</b>					
R653	401	237	0007	MT-GLAZE	47K JA 1W	FB601	610	229	3531	CORE	
R654	401	237	0007	MT-GLAZE	47K JA 1W	FB602	610	229	3531	CORE	
R655	401	105	5301	MT-GLAZE	4.7K JA 1/16W	△ PC601	407	223	7302	PC TLP421F (D4-GB-TP4)	
R656	401	237	0007	MT-GLAZE	47K JA 1W		407	223	8309	PC TLP421F (D4-GR-TP4)	
△ R657	401	237	0007	MT-GLAZE	47K JA 1W	△ PC602	407	223	7302	PC TLP421F (D4-GB-TP4)	
△ R658	402	081	2902	FUSIBLE RES	22 JH 1/2W		407	223	8309	PC TLP421F (D4-GR-TP4)	
R659	401	238	4509	MT-GLAZE	47 JA 1/3W	△ PC603	407	223	7302	PC TLP421F (D4-GB-TP4)	
R671	401	105	0504	MT-GLAZE	1K JA 1/16W		407	223	8309	PC TLP421F (D4-GR-TP4)	
R672	401	257	7406	MT-GLAZE	120 JA 1/3W	△ PTH601	408	037	4600	THERMISTOR NTH11D8R0LA	
R673	401	105	2805	MT-GLAZE	2.2K JA 1/16W	<b>SUB POWER BOARD</b>					
R674	401	105	0603	MT-GLAZE	10K JA 1/16W	<b>610 298 5351 ASSY,PWB,SUB POWER M4LA</b>					
R680	401	212	0206	MT-GLAZE	33K FA 1/16W	<b>1AA0B10C3750B</b>					
R681	401	105	0603	MT-GLAZE	10K JA 1/16W	<b>TRANSISTOR</b>					
R682	401	105	3208	MT-GLAZE	270 JA 1/16W	Q6603	405	047	9007	TR 2SB1204-S-TL	
R683	401	105	0504	MT-GLAZE	1K JA 1/16W		405	047	9106	TR 2SB1204-T-TL	
R685	401	105	4601	MT-GLAZE	3.9K JA 1/16W	Q6604	405	014	4509	TR 2SC2412K T146 R	
R686	401	105	0504	MT-GLAZE	1K JA 1/16W	Q6609	405	014	4509	TR 2SC2412K T146 R	
R687	401	212	0503	MT-GLAZE	6.8K FA 1/16W	Q6611	405	047	9007	TR 2SB1204-S-TL	
R689	401	105	0504	MT-GLAZE	1K JA 1/16W		405	047	9106	TR 2SB1204-T-TL	
R690	401	105	0306	MT-GLAZE	10 JA 1/16W	Q6612	405	014	4509	TR 2SC2412K T146 R	
R691	401	105	3307	MT-GLAZE	2.7K JA 1/16W	Q6613	405	014	4509	TR 2SC2412K T146 R	
R692	401	105	0504	MT-GLAZE	1K JA 1/16W	Q6614	405	014	4509	TR 2SC2412K T146 R	
R693	401	105	0603	MT-GLAZE	10K JA 1/16W	Q6616	405	014	4509	TR 2SC2412K T146 R	
R694	401	105	5301	MT-GLAZE	4.7K JA 1/16W	Q6617	405	014	4509	TR 2SC2412K T146 R	
R695	401	105	0504	MT-GLAZE	1K JA 1/16W	Q6618	405	164	2707	TR SI9803DY	
R697	401	299	1608	MT-GLAZE	1 JE 1/2W	Q6622	405	156	0209	TR 2SK2376	
R698	401	299	1608	MT-GLAZE	1 JE 1/2W						
R699	401	238	4202	MT-GLAZE	1.5K JA 1/3W						
<b>VARIABLE RESISTOR</b>											
VR601	645	025	7414	VR, SEMI, 1K S							
VR681	645	025	7414	VR, SEMI, 1K S							
<b>TRANSFORMER</b>											

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
Q6623	405 014 4509	TR 2SC2412K T146 R	C6664	403 325 8605	ELECT 220U M 16V
Q6624	405 014 4509	TR 2SC2412K T146 R	C6666	403 325 8605	ELECT 220U M 16V
Q6626	405 047 9007	TR 2SB1204-S-TL	C6667	403 331 0303	ELECT 470U M 16V
	405 047 9106	TR 2SB1204-T-TL	C6668	403 331 0303	ELECT 470U M 16V
Q6627	405 047 9007	TR 2SB1204-S-TL	C6669	403 348 3700	ELECT 470U M 25V
	405 047 9106	TR 2SB1204-T-TL	C6671	403 113 3805	CERAMIC 1000P K 50V
Q6628	405 014 4509	TR 2SC2412K T146 R	C6672	403 155 2309	CERAMIC 4700P K 50V
Q6629	405 156 0209	TR 2SK2376	C6673	403 162 5300	ELECT 4.7U M 25V
Q6661	405 014 4509	TR 2SC2412K T146 R	C6674	403 325 8506	ELECT 1000U M 16V
<b>INTEGRATED CIRCUIT</b>			C6678	403 354 8409	ELECT 2200U M 6.3V
IC6601	409 461 7809	IC PQ20WZ11	C6778	403 205 7803	TA-SOLID 2.2U M 16V
IC6602	409 459 5404	IC FA7612CN	<b>RESISTOR</b>		
IC6603	409 459 5404	IC FA7612CN	R6601	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
IC6604	409 481 8503	IC AD8400AR1	R6602	401 219 1107	MT-GLAZE 1.8K FA 1/16W
IC6606	409 481 8503	IC AD8400AR1	R6604	401 203 9904	MT-GLAZE 4.7K FA 1/16W
IC6607	409 461 7809	IC PQ20WZ11	R6606	401 105 0405	MT-GLAZE 100 JA 1/16W
IC6608	409 501 9206	IC LTC1622CS8	R6610	401 238 4202	MT-GLAZE 1.5K JA 1/3W
IC6609	409 461 7809	IC PQ20WZ11	R6611	401 299 1608	MT-GLAZE 1 JE 1/2W
IC6611	409 344 6509	IC UPC1093T-E1	R6620	401 162 6303	MT-GLAZE 330 JA 1W
IC6612	409 344 6509	IC UPC1093T-E1	R6621	401 105 8203	MT-GLAZE 68K JA 1/16W
IC6616	409 459 5404	IC FA7612CN	R6622	401 105 4304	MT-GLAZE 330K JA 1/16W
<b>CAPACITOR</b>			R6623	401 105 5103	MT-GLAZE 47 JA 1/16W
C6601	403 164 0204	CERAMIC 0.1U Z 25V	R6624	401 290 1508	MT-GLAZE 0.1 JE 1/2W
C6602	403 164 0204	CERAMIC 0.1U Z 25V	R6625	401 105 2201	MT-GLAZE 180K JA 1/16W
C6603	403 229 3508	ELECT 100U M 16V	R6626	401 105 0603	MT-GLAZE 10K JA 1/16W
C6605	403 348 3700	ELECT 470U M 25V	R6627	401 105 2904	MT-GLAZE 22K JA 1/16W
C6606	403 333 0806	ELECT 1000U M 10V	R6628	401 202 4009	MT-GLAZE 10K FA 1/16W
C6608	403 348 3700	ELECT 470U M 25V	R6629	401 219 1107	MT-GLAZE 1.8K FA 1/16W
C6609	403 113 3805	CERAMIC 1000P K 50V	R6630	401 212 0206	MT-GLAZE 33K JA 1/16W
C6611	403 155 2309	CERAMIC 4700P K 50V	R6631	401 105 4007	MT-GLAZE 330 JA 1/16W
C6612	403 164 0204	CERAMIC 0.1U Z 25V	R6632	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C6613	403 325 8506	ELECT 1000U M 16V	R6633	401 105 0603	MT-GLAZE 10K JA 1/16W
C6614	403 304 3102	ELECT 22U M 16V	R6634	401 234 5500	MT-GLAZE 18K FA 1/16W
C6617	403 304 3102	ELECT 22U M 16V	R6636	401 260 1903	MT-GLAZE 4.3K FA 1/16W
C6618	403 113 3805	CERAMIC 1000P K 50V	R6637	401 257 7000	MT-GLAZE 820 FA 1/16W
C6619	403 325 8506	ELECT 1000U M 16V	R6638	401 105 5103	MT-GLAZE 47 JA 1/16W
C6620	403 164 0204	CERAMIC 0.1U Z 25V	R6640	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C6621	403 164 0204	CERAMIC 0.1U Z 25V	R6641	401 105 0603	MT-GLAZE 10K JA 1/16W
C6622	403 229 3508	ELECT 100U M 16V	R6642	401 212 0503	MT-GLAZE 6.8K FA 1/16W
C6623	403 164 0204	CERAMIC 0.1U Z 25V	R6643	401 105 0603	MT-GLAZE 10K JA 1/16W
C6624	403 348 3700	ELECT 470U M 25V	R6644	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C6625	403 164 0204	CERAMIC 0.1U Z 25V	R6645	401 290 1508	MT-GLAZE 0.1 JE 1/2W
C6626	403 164 0204	CERAMIC 0.1U Z 25V	R6646	401 105 2201	MT-GLAZE 180K JA 1/16W
C6627	403 325 8506	ELECT 1000U M 16V	R6647	401 105 5103	MT-GLAZE 47 JA 1/16W
C6628	403 333 0806	ELECT 1000U M 10V	R6648	401 162 6303	MT-GLAZE 330 JA 1W
C6629	403 325 8605	ELECT 220U M 16V	R6649	401 234 5500	MT-GLAZE 18K FA 1/16W
C6632	403 325 8506	ELECT 1000U M 16V	R6650	401 105 0603	MT-GLAZE 10K JA 1/16W
C6633	403 334 6906	ELECT 1000U M 6.3V	R6651	401 260 1903	MT-GLAZE 4.3K FA 1/16W
C6634	403 334 6906	ELECT 1000U M 6.3V	R6652	401 212 0206	MT-GLAZE 33K FA 1/16W
C6636	403 333 0806	ELECT 1000U M 10V	R6653	401 105 4304	MT-GLAZE 330K JA 1/16W
C6637	403 333 0806	ELECT 1000U M 10V	R6654	401 105 8203	MT-GLAZE 68K JA 1/16W
C6639	403 157 6602	CERAMIC 470P K 50V	R6655	401 240 6409	MT-GLAZE 2.2 JE 1/2W
C6640	403 164 0204	CERAMIC 0.1U Z 25V	R6656	401 240 6409	MT-GLAZE 2.2 JE 1/2W
C6641	403 157 3601	CERAMIC 100P J 50V	R6657	401 257 7000	MT-GLAZE 820 FA 1/16W
C6642	403 157 3601	CERAMIC 100P J 50V	R6658	401 105 5103	MT-GLAZE 47 JA 1/16W
C6643	403 333 0806	ELECT 1000U M 10V	R6659	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C6644	403 164 0204	CERAMIC 0.1U Z 25V	R6660	401 105 0603	MT-GLAZE 10K JA 1/16W
C6645	403 164 0204	CERAMIC 0.1U Z 25V	R6661	401 105 0603	MT-GLAZE 10K JA 1/16W
C6646	403 164 0204	CERAMIC 0.1U Z 25V	R6662	401 105 0504	MT-GLAZE 1K JA 1/16W
C6647	403 354 8409	ELECT 2200U M 6.3V	R6663	401 238 4202	MT-GLAZE 1.5K JA 1/3W
C6653	403 347 5507	POS-SOLID 470U M 4V	R6664	401 105 0603	MT-GLAZE 10K JA 1/16W
C6654	403 164 0204	CERAMIC 0.1U Z 25V	R6665	401 299 1608	MT-GLAZE 1 JE 1/2W
C6655	403 162 5300	ELECT 4.7U M 25V	R6666	401 105 5301	MT-GLAZE 4.7K JA 1/16W
C6661	403 164 0204	CERAMIC 0.1U Z 25V	R6667	401 105 0603	MT-GLAZE 10K JA 1/16W
C6662	403 325 8605	ELECT 220U M 16V	R6668	401 105 0504	MT-GLAZE 1K JA 1/16W
C6663	403 325 8605	ELECT 220U M 16V	R6669	401 105 0603	MT-GLAZE 10K JA 1/16W
			R6670	401 105 5301	MT-GLAZE 4.7K JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R6671	401 203 9904	MT-GLAZE 4.7K FA 1/16W	L6613	645 007 7975	INDUCTOR,100U K
R6672	401 105 5202	MT-GLAZE 470 JA 1/16W	L6614	645 048 5688	INDUCTOR,47U K
R6673	401 105 8203	MT-GLAZE 68K JA 1/16W	L6616	645 048 5381	INDUCTOR,100U K
R6674	401 105 4304	MT-GLAZE 330K JA 1/16W	L6617	645 048 5688	INDUCTOR,47U K
R6675	401 247 0202	MT-GLAZE 3.9K FA 1/16W	L6619	645 007 7975	INDUCTOR,100U K
R6676	401 212 0206	MT-GLAZE 33K FA 1/16W	<b>DIODE</b>		
R6677	401 230 2503	MT-GLAZE 1K FA 1/16W	D6601	407 004 1000	DIODE DCC010-TB
R6678	401 105 2607	MT-GLAZE 22 JA 1/16W	D6602	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6679	401 247 0202	MT-GLAZE 3.9K FA 1/16W	D6603	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6681	401 212 0008	MT-GLAZE 15K FA 1/16W	D6604	407 149 0807	DIODE 1SS355-TE-17
R6682	401 162 6303	MT-GLAZE 330 JA 1W	D6605	407 004 1000	DIODE DCC010-TB
R6683	401 105 5103	MT-GLAZE 47 JA 1/16W	D6606	407 223 5001	DIODE D1FM3
R6684	401 290 1508	MT-GLAZE 0.1 JE 1/2W	D6607	407 222 1301	DIODE CMS04
R6686	401 105 2201	MT-GLAZE 180K JA 1/16W	D6608	407 149 0807	DIODE 1SS355-TE-17
R6687	401 105 5301	MT-GLAZE 4.7K JA 1/16W	D6609	407 223 5001	DIODE D1FM3
R6689	401 105 0603	MT-GLAZE 10K JA 1/16W	D6610	407 149 0807	DIODE 1SS355-TE-17
R6690	401 105 3307	MT-GLAZE 2.7K JA 1/16W	D6611	407 223 5001	DIODE D1FM3
R6691	401 105 0603	MT-GLAZE 10K JA 1/16W	D6612	407 149 0807	DIODE 1SS355-TE-17
R6692	401 235 4403	MT-GLAZE 560 FA 1/16W	D6613	407 149 0807	DIODE 1SS355-TE-17
R6694	401 225 5601	MT-GLAZE 2.2 JA 1W	D6614	407 149 0807	DIODE 1SS355-TE-17
R6695	401 290 1508	MT-GLAZE 0.1 JE 1/2W	D6615	407 149 0807	DIODE 1SS355-TE-17
R6708	401 219 1107	MT-GLAZE 1.8K FA 1/16W	D6616	407 149 0807	DIODE 1SS355-TE-17
R6709	401 219 1107	MT-GLAZE 1.8K FA 1/16W	D6617	407 149 0807	DIODE 1SS355-TE-17
R6710	401 105 1402	MT-GLAZE 150 JA 1/16W	D6618	407 149 0807	DIODE 1SS355-TE-17
R6711	401 105 0504	MT-GLAZE 1K JA 1/16W	D6619	407 201 2701	DIODE RB051L-40-TE25
R6712	401 105 0504	MT-GLAZE 1K JA 1/16W	D6621	407 201 2701	DIODE RB051L-40-TE25
R6713	401 105 0504	MT-GLAZE 1K JA 1/16W	D6624	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6714	401 105 0504	MT-GLAZE 1K JA 1/16W	D6626	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6717	401 105 0306	MT-GLAZE 10 JA 1/16W	D6627	407 149 0807	DIODE 1SS355-TE-17
R6718	401 105 0306	MT-GLAZE 10 JA 1/16W	D6631	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6719	401 105 0504	MT-GLAZE 1K JA 1/16W	D6632	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6720	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	D6633	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6722	401 105 0603	MT-GLAZE 10K JA 1/16W	D6634	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6723	401 299 1608	MT-GLAZE 1 JE 1/2W	D6661	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
R6725	401 299 1608	MT-GLAZE 1 JE 1/2W	D6662	407 149 0807	DIODE 1SS355-TE-17
R6726	401 259 1501	MT-GLAZE 2.2 JA 1/3W	D6663	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)
R6727	401 105 0603	MT-GLAZE 10K JA 1/16W	D6664	407 149 0807	DIODE 1SS355-TE-17
R6728	401 259 1501	MT-GLAZE 2.2 JA 1/3W	<b>DRIVE BOARD</b>		
R6729	401 105 0603	MT-GLAZE 10K JA 1/16W	<b>610 298 5368 ASSY,PWB,DRIVE M4LA 1AA0B10C3750C</b>		
R6730	401 240 6409	MT-GLAZE 2.2 JE 1/2W	<b>TRANSISTOR</b>		
R6731	401 105 0603	MT-GLAZE 10K JA 1/16W	Q1681	405 134 5905	TR 2SA1037AK-T146-R
R6732	401 105 0603	MT-GLAZE 10K JA 1/16W	Q1682	405 134 5905	TR 2SA1037AK-T146-R
R6736	401 203 9904	MT-GLAZE 4.7K FA 1/16W	<b>INTEGRATED CIRCUIT</b>		
R6737	401 105 5202	MT-GLAZE 470 JA 1/16W	IC1601	409 085 1900	IC LB1645N
R6738	401 247 0202	MT-GLAZE 3.9K FA 1/16W	IC1602	409 114 4803	IC LB1641
R6739	401 105 5301	MT-GLAZE 4.7K JA 1/16W	IC1611	409 114 4803	IC LB1641
R6742	401 105 5301	MT-GLAZE 4.7K JA 1/16W	IC1621	409 124 5906	IC L78M12T-TL
R6775	401 294 5502	MT-GLAZE 0.03 JX 1/4W	IC1631	410 405 9308	IC TDA7056AT/N2
R6777	401 294 5502	MT-GLAZE 0.03 JX 1/4W	IC1632	410 405 9308	IC TDA7056AT/N2
R6779	401 294 5502	MT-GLAZE 0.03 JX 1/4W	IC1641	409 404 6302	IC M62320FP
R6781	401 105 0603	MT-GLAZE 10K JA 1/16W	IC1652	409 367 1604	IC BH3540AFS-E2
R6782	401 105 5301	MT-GLAZE 4.7K JA 1/16W	<b>CAPACITOR</b>		
R6783	401 105 0603	MT-GLAZE 10K JA 1/16W	C1601	403 325 8506	ELECT 1000U M 16V
R6784	401 105 5301	MT-GLAZE 4.7K JA 1/16W	C1602	403 149 9208	CERAMIC 0.01U Z 50V
R6785	401 219 1107	MT-GLAZE 1.8K FA 1/16W	C1603	403 149 9208	CERAMIC 0.01U Z 50V
R6786	401 105 0603	MT-GLAZE 10K JA 1/16W	C1604	403 325 8605	ELECT 220U M 16V
R6787	401 230 2503	MT-GLAZE 1K FA 1/16W	C1606	403 149 9208	CERAMIC 0.01U Z 50V
R6788	401 203 9805	MT-GLAZE 2.7K FA 1/16W	C1607	403 149 9208	CERAMIC 0.01U Z 50V
R6795	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	C1608	403 325 8605	ELECT 220U M 16V
<b>COIL</b>					
L6604	645 048 5381	INDUCTOR,100U K			
L6606	645 048 5688	INDUCTOR,47U K			
L6607	645 037 4791	INDUCTOR,100U M			
L6608	645 048 5688	INDUCTOR,47U K			
L6609	645 046 1996	INDUCTOR,5.6U N			
L6611	645 007 8125	INDUCTOR,47U K			
L6612	645 048 5688	INDUCTOR,47U K			



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
C1612	403 149 9208	CERAMIC 0.01U Z 50V	R1687	401 105 4106	MT-GLAZE 3.3K JA 1/16W
C1613	403 149 9208	CERAMIC 0.01U Z 50V	R1688	401 113 6406	MT-GLAZE 5.1K JA 1/16W
C1614	403 325 8605	ELECT 220U M 16V	R1689	401 105 4106	MT-GLAZE 3.3K JA 1/16W
C1621	403 331 0303	ELECT 470U M 16V	<b>DIODE</b>		
C1622	403 331 0303	ELECT 470U M 16V	D1601	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
C1623	403 164 0204	CERAMIC 0.1U Z 25V	D1602	407 208 9703	ZD UDZS-TE-175.6B
C1624	403 164 0204	CERAMIC 0.1U Z 25V	D1604	407 149 0807	DIODE 1SS355-TE-17
C1626	403 331 0303	ELECT 470U M 16V	D1611	407 223 1003	ZENER DIODE 02DZ5.1Y (TPH3)
C1631	403 325 8605	ELECT 220U M 16V	D1653	407 149 0807	DIODE 1SS355-TE-17
C1632	403 323 8805	CERAMIC 2.2U Z 16V	D1675	407 223 1003	ZENER DIODE 02DZ5.1Y (TPH3)
C1633	403 164 0204	CERAMIC 0.1U Z 25V	<b>FILTER BOARD</b>		
C1634	403 323 8805	CERAMIC 2.2U Z 16V	<b>610 298 5375 ASSY,PWB,FILTER M4LA</b>		
C1636	403 325 8605	ELECT 220U M 16V	<b>1AA0B10C3750D</b>		
C1637	403 164 0204	CERAMIC 0.1U Z 25V	<b>CAPACITOR</b>		
C1641	403 164 0204	CERAMIC 0.1U Z 25V	△ C601	404 081 4702	MT-POLYEST 0.22U M 275V
C1642	403 304 1801	ELECT 100U M 6.3V	△ C602	404 081 4702	MT-POLYEST 0.22U M 275V
C1643	403 164 0204	CERAMIC 0.1U Z 25V	△ C603	404 073 5106	CERAMIC 470P K 250V
C1661	403 323 8805	CERAMIC 2.2U Z 16V	△ C604	404 073 5106	CERAMIC 470P K 250V
C1671	403 323 8805	CERAMIC 2.2U Z 16V	<b>RESISTOR</b>		
C1672	403 323 8805	CERAMIC 2.2U Z 16V	△ R600	401 238 1003	MT-GLAZE 120K JA 1/2W
C1673	403 304 3102	ELECT 22U M 16V	△ R601	401 238 1003	MT-GLAZE 120K JA 1/2W
C1674	403 229 3508	ELECT 100U M 16V	<b>VARIABLE RESISTOR</b>		
C1675	403 229 3508	ELECT 100U M 16V	△ VA601	407 130 2902	VARISTOR ENC471D-14A
C1676	403 304 3102	ELECT 22U M 16V	<b>COIL</b>		
C1677	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	△ L601	645 050 2231	LINE FILTER
C1678	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	<b>MISCELLANEOUS</b>		
C1679	403 164 0204	CERAMIC 0.1U Z 25V	△ F601	423 025 1201	FUSE 250V 8A
<b>RESISTOR</b>			F601A	645 000 5077	HOLDER, FUSE
R1601	401 105 4106	MT-GLAZE 3.3K JA 1/16W	F601B	645 000 5077	HOLDER, FUSE
R1602	401 105 4106	MT-GLAZE 3.3K JA 1/16W	<b>A/V BOARD</b>		
R1603	401 105 0504	MT-GLAZE 1K JA 1/16W	<b>610 298 9380 ASSY,PWB,A/V M4LA</b>		
R1604	401 105 4106	MT-GLAZE 3.3K JA 1/16W	<b>1AA0B10C3810A</b>		
R1606	401 105 4106	MT-GLAZE 3.3K JA 1/16W	<b>TRANSISTOR</b>		
R1607	401 105 0504	MT-GLAZE 1K JA 1/16W	Q2001	405 134 5905	TR 2SA1037AK-T146-R
R1612	401 105 4106	MT-GLAZE 3.3K JA 1/16W	Q2002	405 134 5905	TR 2SA1037AK-T146-R
R1613	401 105 4106	MT-GLAZE 3.3K JA 1/16W	Q2003	405 134 5905	TR 2SA1037AK-T146-R
R1614	401 105 0504	MT-GLAZE 1K JA 1/16W	Q2004	405 014 4509	TR 2SC2412K T146 R
R1621	401 184 2000	MT-GLAZE 2.2 JA 1/2W	Q2006	405 014 4509	TR 2SC2412K T146 R
R1622	401 184 2000	MT-GLAZE 2.2 JA 1/2W	Q5007	405 014 4509	TR 2SC2412K T146 R
R1623	401 184 2000	MT-GLAZE 2.2 JA 1/2W	Q5008	405 014 4509	TR 2SC2412K T146 R
R1624	401 190 1400	MT-GLAZE 0.000 ZA 1/2W	Q5201	405 014 4509	TR 2SC2412K T146 R
R1630	401 276 4707	MT-GLAZE 0.000 ZA 1/3W	Q5202	405 014 4509	TR 2SC2412K T146 R
R1631	401 276 4707	MT-GLAZE 0.000 ZA 1/3W	Q5203	405 014 4509	TR 2SC2412K T146 R
R1632	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	Q5204	405 014 4509	TR 2SC2412K T146 R
R1633	401 105 5301	MT-GLAZE 4.7K JA 1/16W	Q7262	405 014 4509	TR 2SC2412K T146 R
R1635	401 105 5301	MT-GLAZE 4.7K JA 1/16W	<b>INTEGRATED CIRCUIT</b>		
R1636	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	IC101	409 470 2604	IC AD8183ARU
R1638	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	IC1031	409 461 7304	IC AD8057ART
R1639	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	IC1041	409 461 7304	IC AD8057ART
R1641	401 105 0405	MT-GLAZE 100 JA 1/16W	IC1051	409 461 7304	IC AD8057ART
R1642	401 105 0405	MT-GLAZE 100 JA 1/16W	IC3801	409 380 6303	IC HIN232CB
R1643	401 105 6100	MT-GLAZE 560K JA 1/16W		409 273 3501	IC SP232ACT
R1644	401 105 6100	MT-GLAZE 560K JA 1/16W			
R1651	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R1652	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R1657	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R1658	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R1661	401 189 8304	MT-GLAZE 180 JA 1/3W			
R1671	401 105 1501	MT-GLAZE 1.5K JA 1/16W			
R1674	401 105 6506	MT-GLAZE 680 JA 1/16W			
R1680	401 105 8104	MT-GLAZE 56K JA 1/16W			
R1681	401 105 0603	MT-GLAZE 10K JA 1/16W			
R1682	401 105 4106	MT-GLAZE 3.3K JA 1/16W			
R1683	401 113 6406	MT-GLAZE 5.1K JA 1/16W			
R1684	401 105 4106	MT-GLAZE 3.3K JA 1/16W			
R1685	401 105 8104	MT-GLAZE 56K JA 1/16W			
R1686	401 105 0603	MT-GLAZE 10K JA 1/16W			

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
IC3802	409 395 5902	IC TC7SH00FU- (TE85L)	C3811	403 283 6309	CERAMIC 1U Z 10V
IC3803	410 296 5700	IC TWM7000-151020	C3812	403 162 6208	ELECT 1U M 50V
IC3804	410 275 5707	IC TWM7000-162020	C3881	403 162 6208	ELECT 1U M 50V
	410 275 5806	IC TWM7000-162020	C5003	403 323 8805	CERAMIC 2.2U Z 16V
IC5001	409 051 2702	IC TC4052BF(EL)	C5004	403 323 8805	CERAMIC 2.2U Z 16V
IC5201	409 462 0304	IC 24LC21AT/SN	C5006	403 323 8805	CERAMIC 2.2U Z 16V
IC5202	409 051 2900	IC TC4053BF(EL)	C5007	403 323 8805	CERAMIC 2.2U Z 16V
IC5203	409 462 6009	IC AD8185ARU	C5008	403 323 8805	CERAMIC 2.2U Z 16V
IC5204	409 407 7900	IC EL4332CS	C5009	403 323 8805	CERAMIC 2.2U Z 16V
IC7141	409 484 2003	IC BA7078AF-E2	C5011	403 323 1301	CERAMIC 0.47U Z 10V
IC7221	410 343 7008	IC SN74AHCT1G14DBVR	C5012	403 323 1301	CERAMIC 0.47U Z 10V
IC7222	410 343 7008	IC SN74AHCT1G14DBVR	C5013	403 304 3102	ELECT 22U M 16V
<b>CAPACITOR</b>			C5014	403 321 2607	ELECT 10U M 16V
C1004	403 164 0204	CERAMIC 0.1U Z 25V	C5016	403 323 1301	CERAMIC 0.47U Z 10V
C1006	403 164 0204	CERAMIC 0.1U Z 25V	C5204	403 164 0204	CERAMIC 0.1U Z 25V
C1007	403 304 2105	ELECT 47U M 6.3V	C5207	403 283 6309	CERAMIC 1U Z 10V
C1008	403 164 0204	CERAMIC 0.1U Z 25V	C5208	403 283 6309	CERAMIC 1U Z 10V
C1009	403 155 1609	CERAMIC 33P J 50V	C5209	403 304 2105	ELECT 47U M 6.3V
C101	403 321 2607	ELECT 10U M 16V	C5211	403 283 6309	CERAMIC 1U Z 10V
C1011	403 164 0204	CERAMIC 0.1U Z 25V	C5212	403 164 0204	CERAMIC 0.1U Z 25V
C1012	403 155 1609	CERAMIC 33P J 50V	C5213	403 304 2105	ELECT 47U M 6.3V
C1013	403 164 0204	CERAMIC 0.1U Z 25V	C5214	403 149 9208	CERAMIC 0.01U Z 50V
C1014	403 155 1609	CERAMIC 33P J 50V	C5216	403 283 6309	CERAMIC 1U Z 10V
C1016	403 164 0204	CERAMIC 0.1U Z 25V	C5217	403 164 0204	CERAMIC 0.1U Z 25V
C1017	403 304 2105	ELECT 47U M 6.3V	C5218	403 304 2105	ELECT 47U M 6.3V
C1018	403 164 0204	CERAMIC 0.1U Z 25V	C5219	403 283 6309	CERAMIC 1U Z 10V
C102	403 321 2607	ELECT 10U M 16V	C5221	403 304 2105	ELECT 47U M 6.3V
C1021	403 157 4202	CERAMIC 220P J 50V	C5226	403 157 3106	CERAMIC 56P J 50V
C1022	403 283 6309	CERAMIC 1U Z 10V	C5227	403 157 3106	CERAMIC 56P J 50V
C1023	403 304 2105	ELECT 47U M 6.3V	C5228	403 157 3106	CERAMIC 56P J 50V
C1024	403 113 3805	CERAMIC 1000P K 50V	C5251	403 283 6309	CERAMIC 1U Z 10V
C1026	403 113 3805	CERAMIC 1000P K 50V	C5252	403 283 6309	CERAMIC 1U Z 10V
C1027	403 113 3805	CERAMIC 1000P K 50V	C5261	403 267 0606	NP-ELECT 4.7U M 16V
C1028	403 113 3805	CERAMIC 1000P K 50V	C5262	403 267 0606	NP-ELECT 4.7U M 16V
C103	403 321 2607	ELECT 10U M 16V	C5263	403 267 0606	NP-ELECT 4.7U M 16V
C104	403 164 0204	CERAMIC 0.1U Z 25V	C5264	403 267 0606	NP-ELECT 4.7U M 16V
C106	403 164 0204	CERAMIC 0.1U Z 25V	C5271	403 155 1500	CERAMIC 180P J 50V
C107	403 164 0204	CERAMIC 0.1U Z 25V	C5272	403 155 1500	CERAMIC 180P J 50V
C108	403 164 0204	CERAMIC 0.1U Z 25V	C5273	403 157 3809	CERAMIC 120P J 50V
C109	403 149 9208	CERAMIC 0.01U Z 50V	C5274	403 157 3809	CERAMIC 120P J 50V
C111	403 164 0204	CERAMIC 0.1U Z 25V	C5291	403 149 9208	CERAMIC 0.01U Z 50V
C112	403 280 1604	ELECT 220U M 16V	C7143	403 314 5905	CERAMIC 0.47U K 16V
C113	403 164 0204	CERAMIC 0.1U Z 25V	C7144	403 314 5905	CERAMIC 0.47U K 16V
C114	403 280 1604	ELECT 220U M 16V	C7145	403 162 6208	ELECT 1U M 50V
C2007	403 149 9208	CERAMIC 0.01U Z 50V	C7146	403 314 5905	CERAMIC 0.47U K 16V
C2008	403 304 3300	ELECT 47U M 16V	C7148	403 162 6604	ELECT 2.2U M 50V
C2011	403 321 2607	ELECT 10U M 16V	C7149	403 162 6208	ELECT 1U M 50V
C2012	403 321 2607	ELECT 10U M 16V	C7151	403 157 3601	CERAMIC 100P J 50V
C2013	403 321 2607	ELECT 10U M 16V	C7152	403 164 0204	CERAMIC 0.1U Z 25V
C2014	403 164 0204	CERAMIC 0.1U Z 25V	C7153	403 304 1801	ELECT 100U M 6.3V
C2016	403 321 2607	ELECT 10U M 16V	C7221	403 164 0204	CERAMIC 0.1U Z 25V
C2061	403 164 0204	CERAMIC 0.1U Z 25V	C7222	403 164 0204	CERAMIC 0.1U Z 25V
C2081	403 304 1801	ELECT 100U M 6.3V	C7271	403 304 2105	ELECT 47U M 6.3V
C2082	403 304 1801	ELECT 100U M 6.3V	C7272	403 283 6309	CERAMIC 1U Z 10V
C2083	403 304 1801	ELECT 100U M 6.3V	<b>RESISTOR</b>		
C2086	403 283 6309	CERAMIC 1U Z 10V	RB3801	645 025 5380	R-NETWORK 10KX4 1/16W
C2087	403 283 6309	CERAMIC 1U Z 10V		645 026 8014	R-NETWORK 10KX4 1/16W
C2088	403 229 3508	ELECT 100U M 16V		645 026 8021	R-NETWORK 100KX4 1/16W
C2091	403 304 1801	ELECT 100U M 6.3V	RB5001	645 026 8021	R-NETWORK 100KX4 1/16W
C2092	403 304 1801	ELECT 100U M 6.3V	R1001	401 260 4102	MT-GLAZE 75 JA 1/3W
C3801	403 283 6309	CERAMIC 1U Z 10V	R1002	401 260 4102	MT-GLAZE 75 JA 1/3W
C3802	403 162 6208	ELECT 1U M 50V	R1003	401 260 4102	MT-GLAZE 75 JA 1/3W
C3803	403 162 6208	ELECT 1U M 50V	R1004	401 105 0405	MT-GLAZE 100 JA 1/16W
C3804	403 162 6208	ELECT 1U M 50V	R1008	401 105 0405	MT-GLAZE 100 JA 1/16W
C3807	403 283 6309	CERAMIC 1U Z 10V	R1009	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C3808	403 283 6309	CERAMIC 1U Z 10V	R101	401 105 2904	MT-GLAZE 22K JA 1/16W
C3809	403 283 6309	CERAMIC 1U Z 10V	R1012	401 037 5004	MT-GLAZE 0.000 ZA 1/10W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R1014	401 037 5608	MT-GLAZE 10K JA 1/10W	R2027	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1016	401 037 5608	MT-GLAZE 10K JA 1/10W	R2028	401 105 5400	MT-GLAZE 47K JA 1/16W
R1017	401 105 0405	MT-GLAZE 100 JA 1/16W	R2029	401 105 0504	MT-GLAZE 1K JA 1/16W
R1018	401 105 0405	MT-GLAZE 100 JA 1/16W	R2031	401 105 5400	MT-GLAZE 47K JA 1/16W
R1019	401 260 4102	MT-GLAZE 75 JA 1/3W	R2032	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R102	401 105 8104	MT-GLAZE 56K JA 1/16W	R2033	401 105 0504	MT-GLAZE 1K JA 1/16W
R1021	401 260 4102	MT-GLAZE 75 JA 1/3W	R2034	401 038 6604	MT-GLAZE 470K JA 1/10W
R1022	401 260 4102	MT-GLAZE 75 JA 1/3W	R2036	401 038 6604	MT-GLAZE 470K JA 1/10W
R1024	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R2039	401 037 5202	MT-GLAZE 100 JA 1/10W
R1027	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R2041	401 037 5202	MT-GLAZE 100 JA 1/10W
R1028	401 105 0405	MT-GLAZE 100 JA 1/16W	R2044	401 037 5202	MT-GLAZE 100 JA 1/10W
R1029	401 105 0405	MT-GLAZE 100 JA 1/16W	R2046	401 105 0603	MT-GLAZE 10K JA 1/16W
R103	401 105 2904	MT-GLAZE 22K JA 1/16W	R2047	401 105 4007	MT-GLAZE 330 JA 1/16W
R1031	401 105 0405	MT-GLAZE 100 JA 1/16W	R2062	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1032	401 105 0405	MT-GLAZE 100 JA 1/16W	R2070	401 037 5400	MT-GLAZE 1K JA 1/10W
R1033	401 105 0405	MT-GLAZE 100 JA 1/16W	R2074	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1038	401 105 0504	MT-GLAZE 1K JA 1/16W	R3801	401 105 0405	MT-GLAZE 100 JA 1/16W
R104	401 105 8104	MT-GLAZE 56K JA 1/16W	R3802	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1041	401 105 0504	MT-GLAZE 1K JA 1/16W	R3803	401 105 5509	MT-GLAZE 470K JA 1/16W
R1043	401 105 0504	MT-GLAZE 1K JA 1/16W	R3804	401 105 0405	MT-GLAZE 100 JA 1/16W
R1046	401 038 6604	MT-GLAZE 470K JA 1/10W	R3806	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1047	401 038 6604	MT-GLAZE 470K JA 1/10W	R3807	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1048	401 038 6604	MT-GLAZE 470K JA 1/10W	R3814	401 105 0603	MT-GLAZE 10K JA 1/16W
R1049	401 038 6604	MT-GLAZE 470K JA 1/10W	R3816	401 105 0405	MT-GLAZE 100 JA 1/16W
R1051	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R3817	401 105 0405	MT-GLAZE 100 JA 1/16W
R1052	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R3818	401 105 0603	MT-GLAZE 10K JA 1/16W
R1053	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R3819	401 105 4205	MT-GLAZE 33K JA 1/16W
R1054	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	R3821	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1056	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3822	401 105 0603	MT-GLAZE 10K JA 1/16W
R1057	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3823	401 105 0603	MT-GLAZE 10K JA 1/16W
R1058	401 105 0405	MT-GLAZE 100 JA 1/16W	R3824	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R106	401 105 2904	MT-GLAZE 22K JA 1/16W	R3826	401 105 0603	MT-GLAZE 10K JA 1/16W
R1061	401 105 0405	MT-GLAZE 100 JA 1/16W	R3827	401 105 0405	MT-GLAZE 100 JA 1/16W
R1062	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3828	401 105 0603	MT-GLAZE 10K JA 1/16W
R1063	401 105 0405	MT-GLAZE 100 JA 1/16W	R3829	401 105 0603	MT-GLAZE 10K JA 1/16W
R107	401 105 8104	MT-GLAZE 56K JA 1/16W	R3831	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R108	401 105 0405	MT-GLAZE 100 JA 1/16W	R3832	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R109	401 105 0405	MT-GLAZE 100 JA 1/16W	R5009	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R111	401 105 0405	MT-GLAZE 100 JA 1/16W	R5011	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R112	401 105 0405	MT-GLAZE 100 JA 1/16W	R5012	401 105 0405	MT-GLAZE 100 JA 1/16W
R113	401 105 0405	MT-GLAZE 100 JA 1/16W	R5013	401 105 0405	MT-GLAZE 100 JA 1/16W
R114	401 105 0405	MT-GLAZE 100 JA 1/16W	R5014	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R122	401 105 0504	MT-GLAZE 1K JA 1/16W	R5016	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R123	401 105 3901	MT-GLAZE 33 JA 1/16W	R5017	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R124	401 105 3901	MT-GLAZE 33 JA 1/16W	R5018	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R126	401 105 3901	MT-GLAZE 33 JA 1/16W	R5019	401 105 0405	MT-GLAZE 100 JA 1/16W
R2001	401 260 4102	MT-GLAZE 75 JA 1/3W	R5021	401 105 0405	MT-GLAZE 100 JA 1/16W
R2002	401 260 4102	MT-GLAZE 75 JA 1/3W	R5201	401 105 0405	MT-GLAZE 100 JA 1/16W
R2003	401 260 4102	MT-GLAZE 75 JA 1/3W	R5202	401 105 0405	MT-GLAZE 100 JA 1/16W
R2004	401 260 4102	MT-GLAZE 75 JA 1/3W	R5203	401 105 0405	MT-GLAZE 100 JA 1/16W
R2005	401 260 4102	MT-GLAZE 75 JA 1/3W	R5204	401 037 5608	MT-GLAZE 10K JA 1/10W
R2006	401 037 5202	MT-GLAZE 100 JA 1/10W	R5206	401 105 0405	MT-GLAZE 100 JA 1/16W
R2008	401 105 0603	MT-GLAZE 10K JA 1/16W	R5207	401 105 0405	MT-GLAZE 100 JA 1/16W
R2009	401 105 5400	MT-GLAZE 47K JA 1/16W	R5208	401 105 0801	MT-GLAZE 12 JA 1/16W
R2011	401 105 0504	MT-GLAZE 1K JA 1/16W	R5209	401 105 0801	MT-GLAZE 12 JA 1/16W
R2012	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R5211	401 105 0801	MT-GLAZE 12 JA 1/16W
R2013	401 105 2904	MT-GLAZE 22K JA 1/16W	R5212	401 105 2607	MT-GLAZE 22 JA 1/16W
R2014	401 105 5400	MT-GLAZE 47K JA 1/16W	R5213	401 105 2607	MT-GLAZE 22 JA 1/16W
R2016	401 105 0504	MT-GLAZE 1K JA 1/16W	R5215	401 105 2607	MT-GLAZE 22 JA 1/16W
R2017	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R5216	401 105 0702	MT-GLAZE 100K JA 1/16W
R2018	401 105 2904	MT-GLAZE 22K JA 1/16W	R5217	401 105 0702	MT-GLAZE 100K JA 1/16W
R2019	401 105 5400	MT-GLAZE 47K JA 1/16W	R5218	401 105 0702	MT-GLAZE 100K JA 1/16W
R2021	401 105 0504	MT-GLAZE 1K JA 1/16W	R5219	401 105 1402	MT-GLAZE 150 JA 1/16W
R2022	401 105 2904	MT-GLAZE 22K JA 1/16W	R5221	401 258 9904	MT-GLAZE 10 JA 1/3W
R2023	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R5223	401 105 1402	MT-GLAZE 150 JA 1/16W
R2024	401 105 5400	MT-GLAZE 47K JA 1/16W	R5224	401 105 1402	MT-GLAZE 150 JA 1/16W
R2026	401 105 5400	MT-GLAZE 47K JA 1/16W	R5226	401 105 0405	MT-GLAZE 100 JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R5227	401 105 0603	MT-GLAZE 10K JA 1/16W	D1009	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
R5228	401 105 0603	MT-GLAZE 10K JA 1/16W	D1011	407 201 2701	DIODE RB051L-40-TE25
R5229	401 105 0603	MT-GLAZE 10K JA 1/16W	D1012	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
R5231	401 105 0504	MT-GLAZE 1K JA 1/16W	D1013	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
R5233	401 105 0603	MT-GLAZE 10K JA 1/16W	D1014	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R5271	401 105 0702	MT-GLAZE 100K JA 1/16W	D1016	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7147	401 105 8005	MT-GLAZE 1M JA 1/16W	D1017	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7148	401 105 4601	MT-GLAZE 3.9K JA 1/16W	D1018	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7221	401 105 1303	MT-GLAZE 15 JA 1/16W	D1019	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7222	401 105 1303	MT-GLAZE 15 JA 1/16W	D1021	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7223	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	D1022	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7224	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	D1023	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7227	401 105 0405	MT-GLAZE 100 JA 1/16W	D1024	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7229	401 105 0405	MT-GLAZE 100 JA 1/16W	D1026	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7266	401 105 0603	MT-GLAZE 10K JA 1/16W	D1027	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7267	401 105 0603	MT-GLAZE 10K JA 1/16W	D1028	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7273	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	D1029	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
R7293	401 105 0405	MT-GLAZE 100 JA 1/16W	D1031	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
<b>COIL</b>			D1032	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1001	645 024 0669	FILTER,EMI 20PF	D1033	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1002	645 024 0669	FILTER,EMI 20PF	D1034	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L1003	645 024 0669	FILTER,EMI 20PF	D1036	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L1004	645 044 8843	FILTER,EMI 200MHZ	D1037	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L1006	645 044 8843	FILTER,EMI 200MHZ	D1038	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L1007	645 024 0669	FILTER,EMI 20PF	D1039	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1008	645 024 0669	FILTER,EMI 20PF	D1041	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1009	645 024 0669	FILTER,EMI 20PF	D1042	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1011	645 044 8843	FILTER,EMI 200MHZ	D1043	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1012	645 044 8843	FILTER,EMI 200MHZ	D1044	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1013	645 045 6183	FILTER,EMI 25MHZ	D1046	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1014	645 045 6183	FILTER,EMI 25MHZ	D1047	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1016	645 045 6183	FILTER,EMI 25MHZ	D1048	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1017	645 045 6183	FILTER,EMI 25MHZ	D1049	407 223 0709	ZENER DIODE 02DZ20Y (TPH3)
L1018	645 045 6183	FILTER,EMI 25MHZ	D2001	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1019	645 045 6183	FILTER,EMI 25MHZ	D2002	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L102	401 035 4306	MT-GLAZE 10 JA 1/8W	D2003	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1021	645 045 6183	FILTER,EMI 25MHZ	D2004	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1022	645 045 6183	FILTER,EMI 25MHZ	D2006	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1023	645 045 6183	FILTER,EMI 25MHZ	D2007	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1024	645 045 6183	FILTER,EMI 25MHZ	D2008	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L1026	645 045 6183	FILTER,EMI 25MHZ	D2009	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2001	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D2011	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2002	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D2012	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2003	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D2013	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L2004	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D2014	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L2006	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D2015	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L2007	645 044 8836	FILTER,EMI 100MHZ	D2016	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L2008	645 044 8836	FILTER,EMI 100MHZ	D2017	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)
L2009	645 044 8836	FILTER,EMI 100MHZ	D2023	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2011	645 044 8836	FILTER,EMI 100MHZ	D2024	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2012	645 044 8836	FILTER,EMI 100MHZ	D2026	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)
L2013	645 045 6183	FILTER,EMI 25MHZ	D3801	407 149 0807	DIODE 1SS355-TE-17
L2014	645 045 6183	FILTER,EMI 25MHZ	D3802	407 149 0807	DIODE 1SS355-TE-17
L2015	645 045 6183	FILTER,EMI 25MHZ	D3803	407 223 1003	ZENER DIODE 02DZ5.1Y (TPH3)
L2018	645 045 6183	FILTER,EMI 25MHZ	D5006	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
L2019	645 045 6183	FILTER,EMI 25MHZ	D5007	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
L5201	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D5008	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
L5202	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	D5009	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
<b>DIODE</b>			D5011	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
D1001	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5012	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
D1002	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5013	407 223 0600	ZENER DIODE 02DZ15Y (TPH3)
D1003	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5201	407 201 2701	DIODE RB051L-40-TE25
D1004	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5202	407 149 0807	DIODE 1SS355-TE-17
D1006	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5203	407 149 0807	DIODE 1SS355-TE-17
D1007	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)	D5204	407 149 0807	DIODE 1SS355-TE-17
D1008	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)	D5206	407 149 0807	DIODE 1SS355-TE-17
			D7221	407 223 0907	ZENER DIODE 02DZ4.7Y (TPH3)

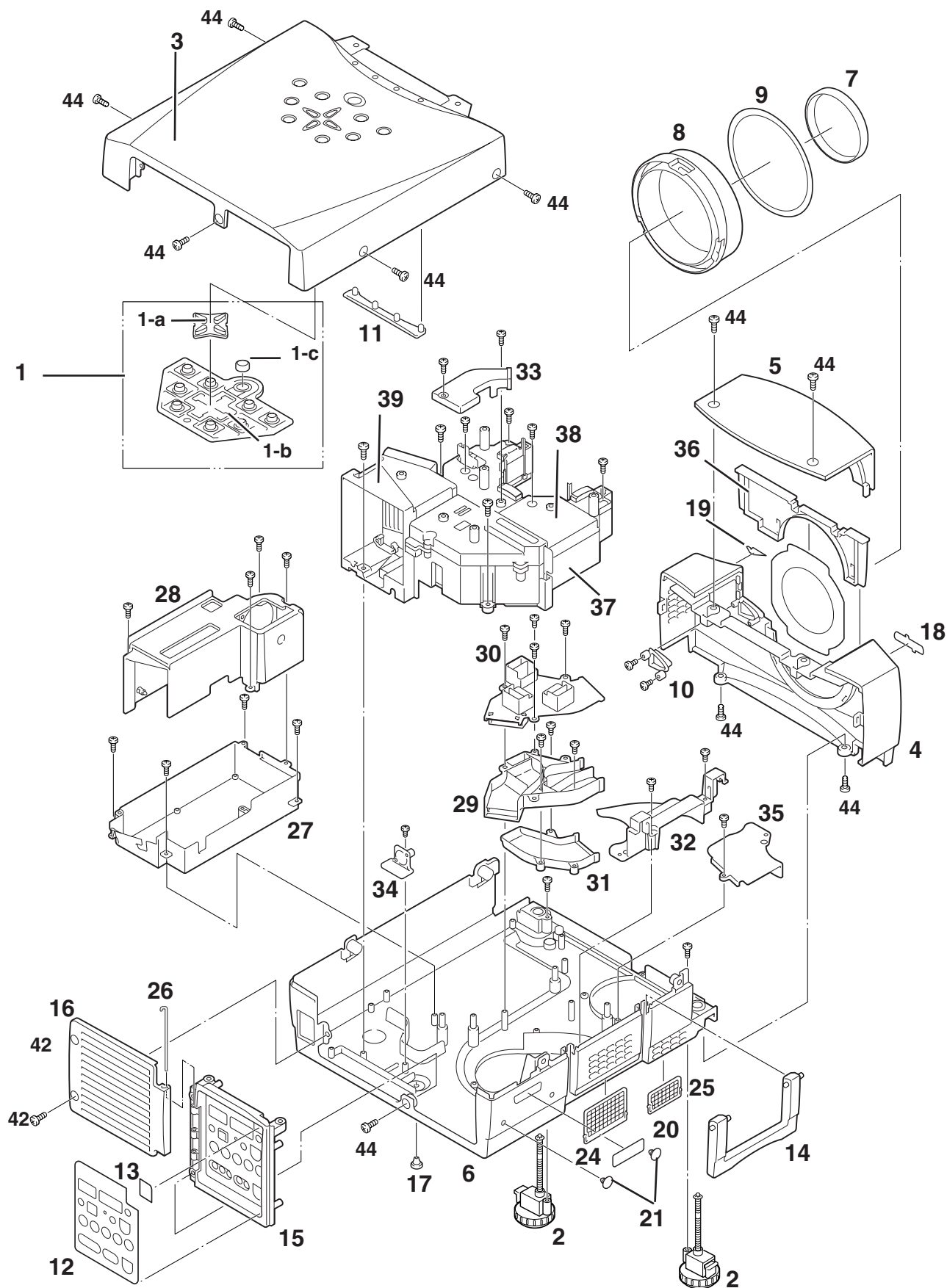


## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
D7222	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3		645 046 1354	CABLE,AUDIO
<b>MISCELLANEOUS</b>				645 013 8768	CABLE,S TERMINAL
AU1001	645 034 8501	UNIT,REMOCON RECEIVER	△ AC CORD		
IC2001	407 105 8700	PHOTO COUPLE PC113B	(US)	645 002 9189	CORD,POWER-3.0MK,UL
K10A	645 009 8093	SOCKET,D-SUB 15P	OWNER'S MANUAL		
K10B	645 036 5201	SOCKET,BNC 5P	(English)	610 298 6891	OWNER'S MANUAL-M4LA
K10E	645 000 2595	SOCKET,DIN 8P	(Germany)	610 298 6907	OWNER'S MANUAL-M4LA-D
K10F	645 048 4650	SOCKET,DVI 24P	(French)	610 298 6914	OWNER'S MANUAL-M4LA-F
K10G	645 000 2571	JACK,PHONE D8.0	(Italy)	610 298 6921	OWNER'S MANUAL-M4LA-I
K10H	645 000 2571	JACK,PHONE D8.0	(Spanish)	610 298 6938	OWNER'S MANUAL-M4LA-E
K20A	645 041 3506	JACK,RCA-2			
K20B	645 041 3537	JACK,RCA-3			
K20D	610 010 8295	SOCKET,DIN 4P			
K20H	645 000 2571	JACK,PHONE D8.0			
SW1001	645 042 8197	SWITCH,PUSH 1P-1TX1			
X3802	645 021 1218	OSC,CERAMIC 8.00MHZ			
	645 037 5187	OSC,CERAMIC 8.00MHZ			
X3803	645 021 1218	OSC,CERAMIC 8.00MHZ			
	645 037 5187	OSC,CERAMIC 8.00MHZ			
<b>I/F BOARD</b>					
<b>610 298 9397 ASSY,PWB,I/F M4LA</b>					
<b>1AA0B10C3810B</b>					
<b>INTEGRATED CIRCUIT</b>					
IC7001	409 523 7006	IC PQ05VY3H3ZP			
<b>CAPACITOR</b>					
C7011	403 304 2402	ELECT 100U M 10V			
C7012	403 164 0204	CERAMIC 0.1U Z 25V			
C7013	403 164 0204	CERAMIC 0.1U Z 25V			
C7014	403 304 1801	ELECT 100U M 6.3V			
<b>RESISTOR</b>					
R7007	401 105 0405	MT-GLAZE 100 JA 1/16W			
R7008	401 105 0405	MT-GLAZE 100 JA 1/16W			
R7009	401 105 0405	MT-GLAZE 100 JA 1/16W			
R7011	401 290 1508	MT-GLAZE 0.1 JE 1/2W			
R7012	401 105 0405	MT-GLAZE 100 JA 1/16W			
R7013	401 212 0503	MT-GLAZE 6.8K FA 1/16W			
R7014	401 202 4108	MT-GLAZE 2K FA 1/16W			
R7016	401 113 4907	MT-GLAZE 200 JA 1/16W			
<b>DIODE</b>					
D7001	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
D7002	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
D7003	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
D7004	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
D7006	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
D7007	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3			
<b>MISCELLANEOUS</b>					
K70C	645 051 9611	PLUG,D-SUB 25P			
<b>ACCESSORIES</b>					
	645 015 3976	CABLE,FXAF			
	610 234 0969	CABLE			
	645 054 3135	CABLE,MOUSE SRAL			
	645 054 3142	CABLE,MOUSE SRAL			
	645 039 7219	CABLE,MOUSE SRAL			
	645 052 6640	ASSY,REMOCON CXLK			
	610 298 8529	RC-BATTERY LID-CXLK			
	610 294 3351	COVER,DUST-MA8A			
	645 042 2188	CABLE,VIDEO			

Note: Parts order must contain Chassis No., Part No., and Descriptions.

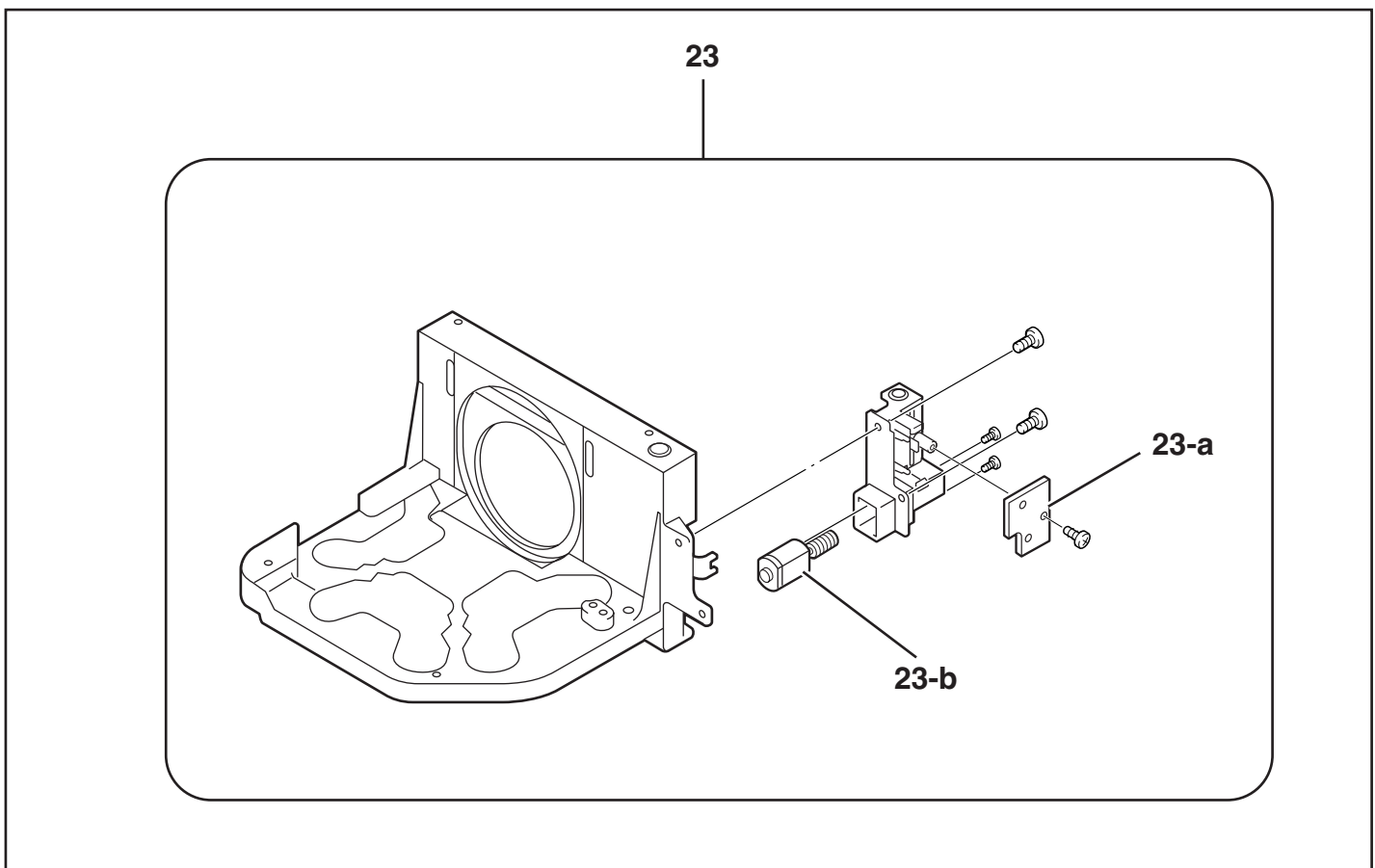
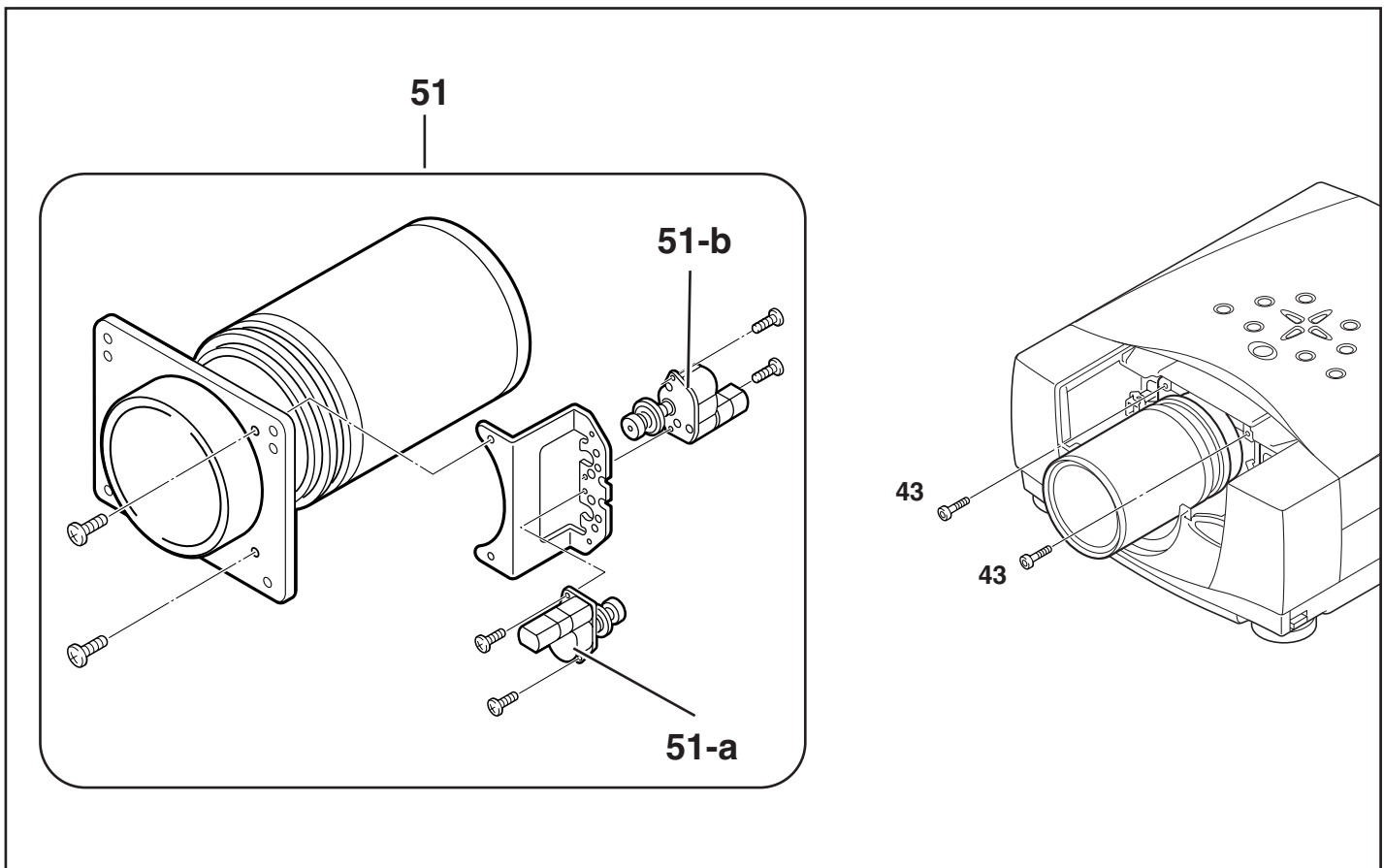
## CABINET PARTS



## Mechanical Parts List

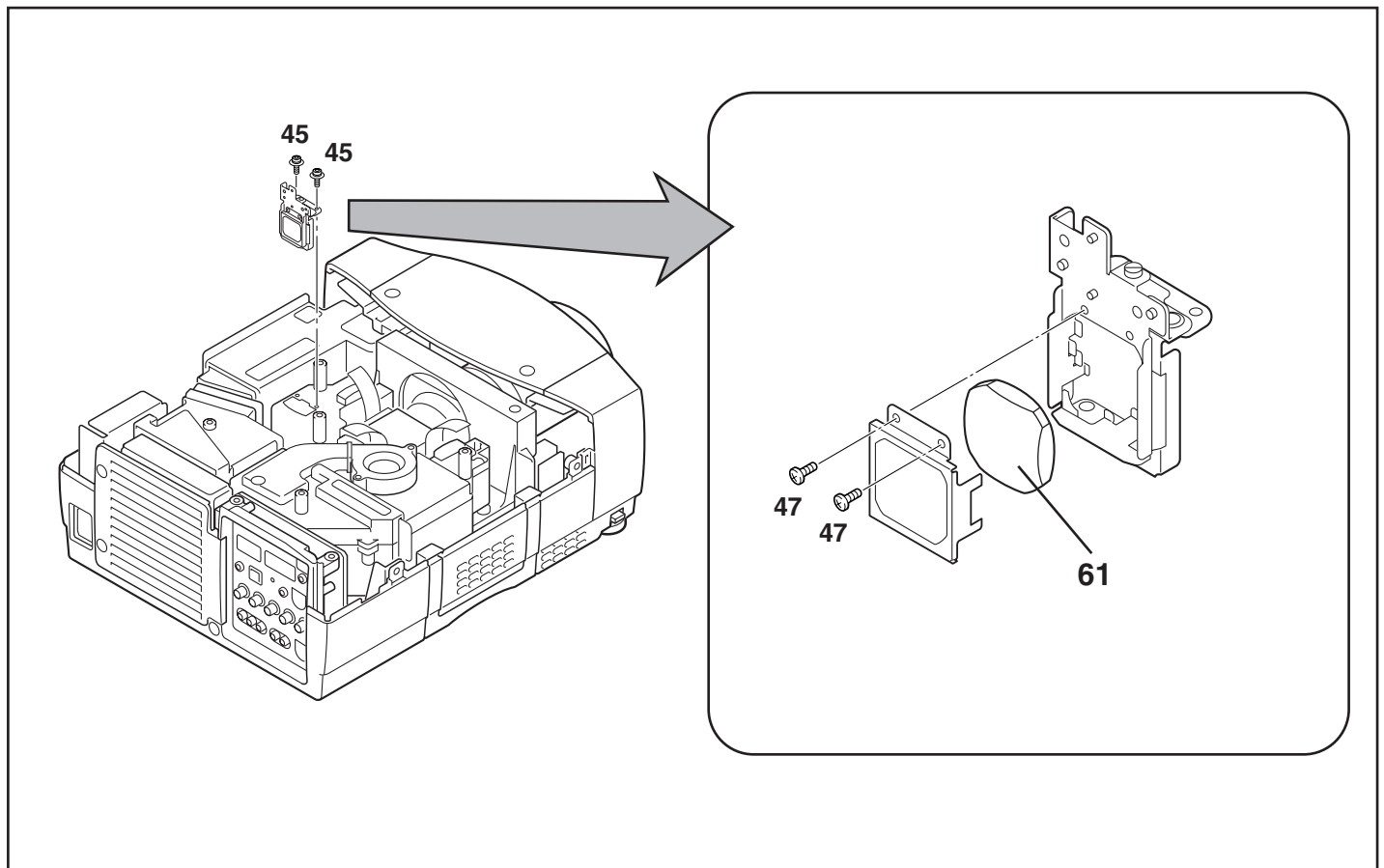
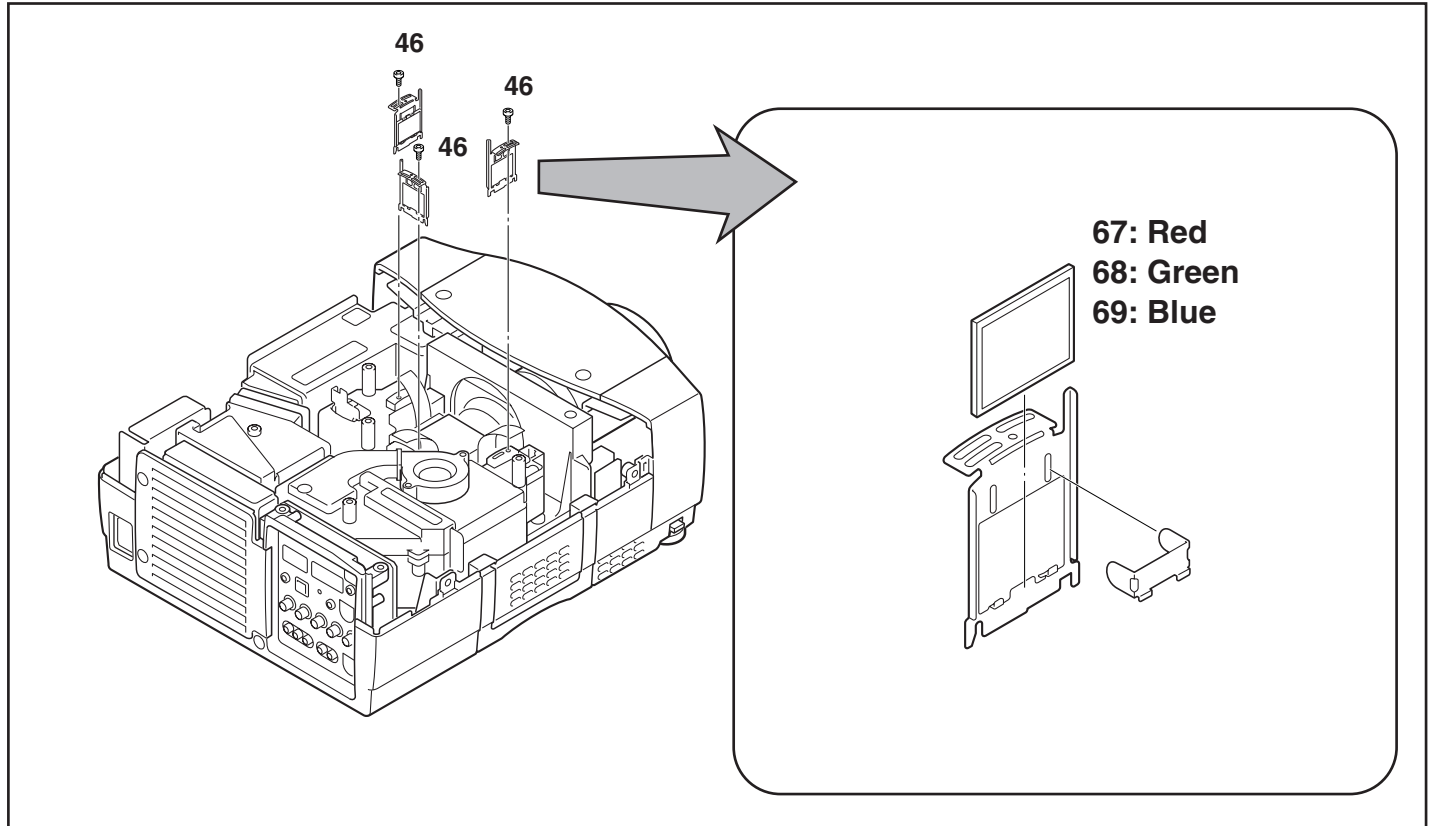
Key No.	Part No.	Description	Key No.	Part No.	Description
<b>CABINET PARTS</b>			<b>SCREWS-CABINET-</b>		
1	610 293 5493	ASSY,BUTTON-MA8A (Including Key No. 1-a, b, c)	42	412 063 8006	SPECIAL SCREW (BLACK)
1-a	610 293 5554	BUTTON-MA8A	43	412 062 3705	SPECIAL SCREW
1-b	610 294 2637	BUTTON U/D-MA8A	44	411 001 2403	SCR S-TPG BIN 4X10
1-c	610 293 5875	CAP BUTTON-MA8A	<b>SCREWS-CHASSIS-</b>		
2	610 298 6648	COMPL,STAND LEG-M4LA	45	411 174 9308	BOLT HEX-SCT+SW+W 2.5X6
3	610 298 6693	CABINET TOP-M4LA	46	411 174 9407	BOLT HEX-SCT 2.5X6
4	610 302 0020	CABINET FRONT SERVICE-M4L	47	411 030 7301	SCR BIN 2X6
5	610 298 6716	CABINET FRONT A-M4LA	<b>OPTICAL PARTS</b>		
6	610 298 8383	CABINET BOTTOM-M4LA	51	645 043 7144	ASSY,LENS,PROJECTION
7	610 277 2203	CAP LENS-M6SAA	51-a/b	645 032 8664	MOTOR,LENS (Z,F) DC 0.2W
8	610 298 6747	COVER CABINET FRONT-M4LA	52	645 041 3711	ASSY,PRISM (PBS)
9	610 294 5225	DEC RING-MA8A	53	610 299 2724	ASSY,LCD PNL/PRISM-M4LA (Including Key No. 53-a, b, c, d)
10	610 293 5899	DEC INLAY RC-MA8A	53-a	645 052 6800	POLARIZED GLASS (OUT/R)
11	610 293 5912	DEC INLAY LED-MA8A	53-b	645 054 8932	POLARIZED GLASS (OUT/G)
12	610 300 6581	DEC AV SHEET-M4LA	53-c	645 052 6824	POLARIZED GLASS (OUT/B)
13	610 293 5936	DEC SHEET RC-MA8A	53-d	645 055 0003	OPTICAL FILTER (WV-KC) 2
14	610 298 6761	HANDLE-M4LA	54	645 054 0301	LENS,CONDENSER (B)
15	610 298 6785	PANEL AV-M4LA	55	645 054 0318	LENS,INTEGRATOR (IN-W)
16	610 298 6792	PANEL FAN-M4LA	56	645 054 0325	LENS,INTEGRATOR (OUT-W)
17	610 298 8567	SPACER LEG-MA8B	57	645 047 2855	LENS,CONDENSER (IN)
18	645 048 6043	BADGE,SANYO*35.0X7.5L35.0	58	645 047 2862	LENS,CONDENSER (OUT)
19	610 289 1812	BADGE V MARK S-MK6A	59	645 047 2879	LENS,CONDENSER (R)
20	610 298 8574	SPACER COVER NWMG-MA8BA	60	645 047 2886	LENS,RELAY (IN)
21	610 298 8581	SPACER COVER SCREW NWMG-M	61	645 047 2893	LENS,RELAY (OUT)
<b>CHASSIS PARTS</b>			62	645 054 0295	LENS,CONDENSER (G)
23	610 300 0183	COMPL,HOLDER LNS-MA8AA (Including Key No.21-a,b)	63	645 044 2575	MIRROR (R)
23-a	610 294 6956	PWB,LNS SENSOR MA8A	64	645 047 7508	MIRROR (W-COLD)
23-b	645 048 6128	ASSY,MOTOR (MA8A)	65	645 047 7515	MIRROR (B)
24	610 293 5844	ASSY,PANEL NET A-MA8A	66	645 054 0332	OPTICAL FILTER (UV CUT)
25	610 293 5851	ASSY,PANEL NET B-MA8A	67	645 054 8604	POLARIZED GLASS (R-FILTER)
26	610 293 6131	MOUNTING SHAFT-MA8A	68	645 054 8895	POLARIZED GLASS (IN/G)
27	610 293 6162	MOUNTING POW BTM-MA8A	69	645 052 6794	POLARIZED GLASS (IN/B)
28	610 299 5381	MOUNTING POW TOP-MA8AA	70	645 054 0257	DICHROIC MIRROR (G)
29	610 293 6186	MOUNTING DUCT BTM-MA8A	71	645 054 0264	DICHROIC MIRROR (B)
30	610 293 6193	MOUNTING DUCT TOP-MA8A			
31	610 293 6209	MOUNTING DUCT B COVER-MA8			
32	610 293 6216	MOUNTING DUCT FAN A-MA8A			
33	610 293 6223	MOUNTING DUCT PBS-MA8A			
34	610 293 6230	MOUNTING TEMP SW-MA8A			
35	610 293 6650	MOUNTING DUCT FAN B-MA8A			
36	610 293 9934	MTG COVER LNS-MA8A			
37	610 293 4830	OPTICAL BASE BTM-MA8A			
or	610 299 2922	OPTICAL BASE BTM-MA8AA			
38	610 293 4847	OPTICAL BASE TOP-MA8A			
39	610 293 5660	OPTICAL LAMP-MA8A			
or	610 299 2939	OPTICAL LAMP-MA8AA			

## Mechanical Parts List

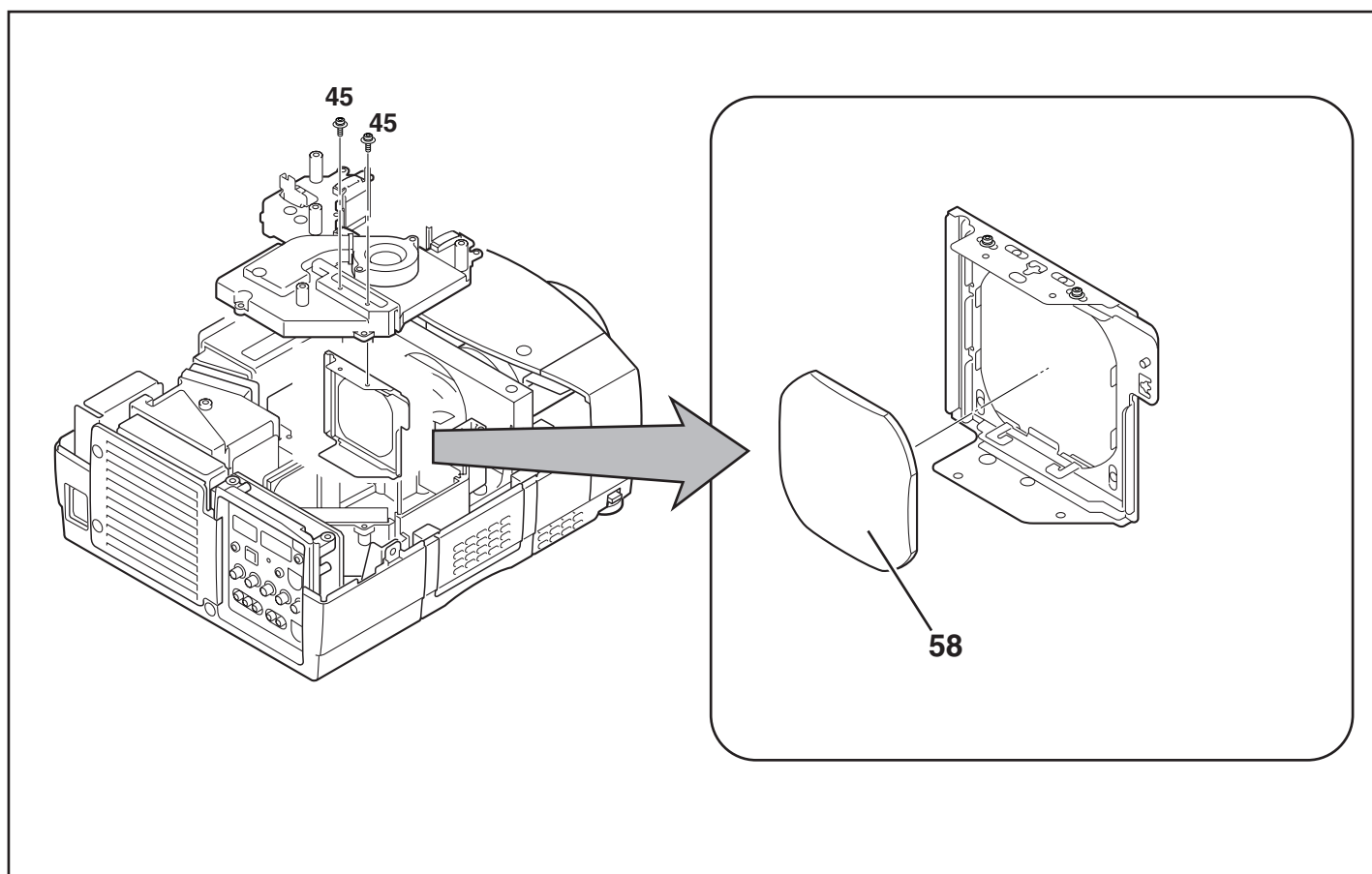
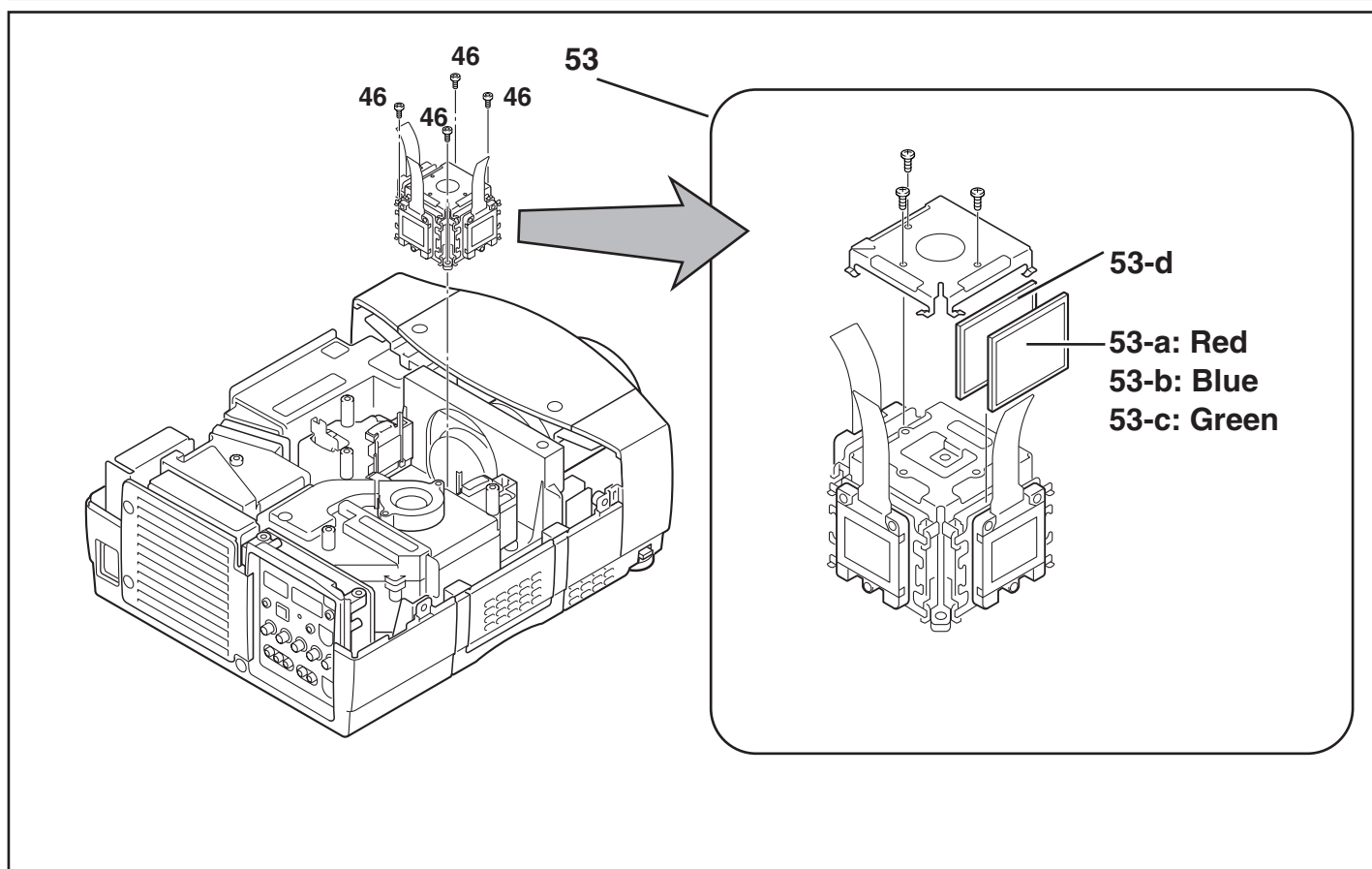


## Optical Parts List

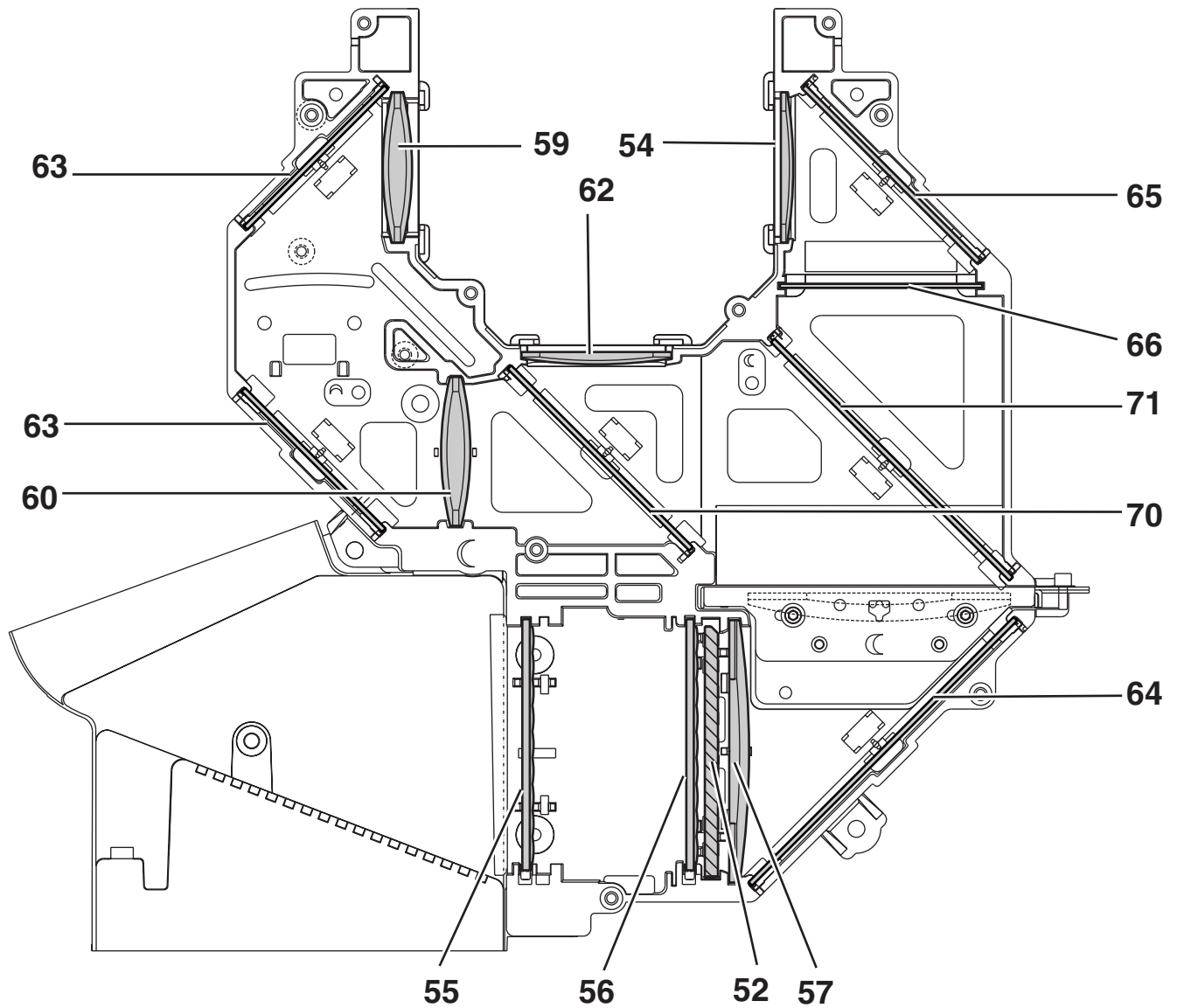
Note: Parts order must contain Chassis No., Part No., and Descriptions.



## Optical Parts List



## Optical Parts List

**CAUTION:**

Part must be placed in specified direction when replacing the optical parts. Please see “Optical Parts Disassemblies” for further instructions.





## ■ Diagrams & Drawings

### Schematic Diagrams Printed Wiring Board Drawings

Model	Chassis No.
PLV-70	M4L-7000

This model is constructed by following boards, and the information of part numbers and values indicated on these diagrams are at the beginning of production. To improve the performance, there may be some differences to the actual set. When you order the service parts, use service parts code mentioned on the parts list in this service manual.

Board Name	Board Number
1AA0B10C37400	MAIN BOARD
1AA0B10C3810A	A/V BOARD
1AA0B10C3810B	I/F BOARD
1AA0B10C3390A	CONTROL BOARD
1AA0B10C3390C	RC FRONT BOARD
1AA0B10C3390D	CONNECT BOARD
1AA0B10C3390E	SENSOR1 BOARD
1AA0B10C3750A	POWER BOARD
1AA0B10C3750B	SUB POWER BOARD
1AA0B10C3750C	DRIVE BOARD
1AA0B10C3750D	FILTER BOARD

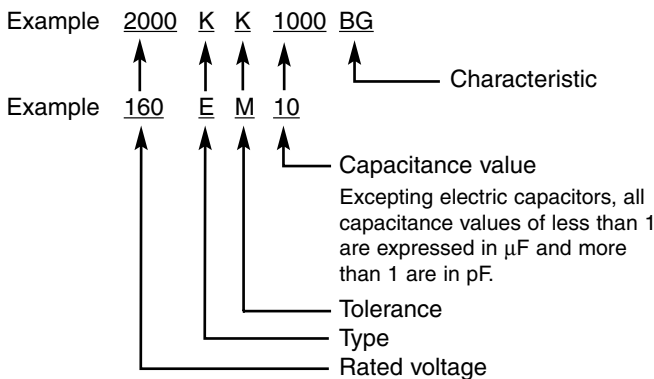
These schematic diagrams and printed wiring board drawings are a part of the service manual original for chassis No. M4L-7000, model PLV-70. File with the service manual No. SM5110361.

# Parts description and reading in schematic diagram

M4L-7000

1. The parts specification of resistors, capacitors and coils are expressed in designated code. Please check the parts description by the following code table.
2. Some of transistors and diodes are indicated in mark for the substitution of parts name. Please check the parts name by the following code table.
3. Voltages and waveforms were taken with a video color bar signal(1Vp-p at 75 ohms terminated) and controls to normal.
4. Voltages were taken with a high-impedance digital voltmeter.

## Capacitor Reading



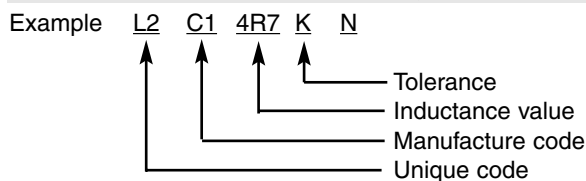
Material table

Mark	Material
E	Electrolytic
P	Electrolytic (non-polarized)
C	Ceramic (temperature compensation)
K	Ceramic
F	Polyester
N	Polypropylene
M	Metalized polypropylene
H	Metalized polypropylar
B	Ceramic (semiconductor)
G	Metalized polyester
Y	Composite film
S	Styrol
T	Tantalum oxide solid electrolytic
U	Organic semiconductive electrolyte
D	Electric double layer electrolytic

Tolerance table

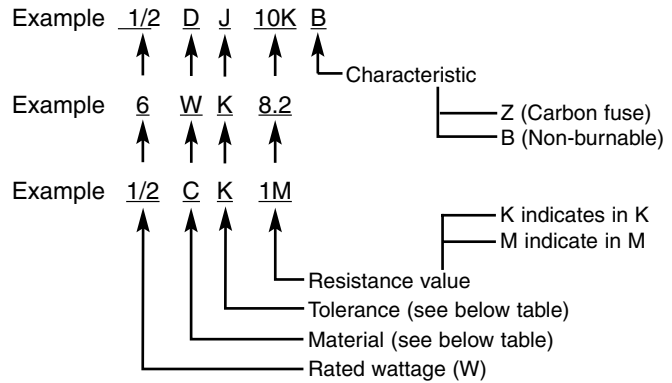
Mark	Tolerance
A	not specified
B	$\pm 0.1$
C	$\pm 0.25$
D	$\pm 0.5$
F	$\pm 1$
G	$\pm 2$
E	$\pm 2.5$
H	$\pm 3$
J	$\pm 5$
K	$\pm 10$
M	$\pm 20$
N	$\pm 30$
P	+100 -0
Q	+30 -10
T	+50 -10
U	+75 -10
V	+20 -10
W	+100 -10
X	+40 -20
Y	+150 -10
Z	+80 -20

## Coil Reading



Mark	Tolerance (nH)	Mark	Tolerance (%)
C	$\pm 0.25$	G	$\pm 2$
D	$\pm 0.5$	J	$\pm 5$
S	$\pm 0.3$	K	$\pm 10$
A	$\pm 0.2$	L	$\pm 15$
		M	$\pm 20$

## Resistor Reading



Note: Resistor which is indicated with resistance value only are 1/6W carbon resistor. Resistor which is indicated with material, tolerance and value are 1/4W rated wattage.

Material table

Mark	Material
D	Carbon
N	Metal film
S	Oxide metal film
C	Solid
G	Metal glaze
W	Wire winding or cement
H	Ceramic
F	Fusible

Tolerance table

Mark	Tolerance
A	$\pm 0.05$
B	$\pm 0.1$
C	$\pm 0.25$
D	$\pm 0.5$
F	$\pm 1$
G	$\pm 2$
J	$\pm 5$
K	$\pm 10$
M	$\pm 20$
P	+5 -15
Z	used in 0 ohm

## Diode/Transistor Type Reading

### Diode

Mark	Type number
R	1S2076A, 1S2473, 1N4148
AA	1S2076A, 1S2473, 1SS133, 1N4148

### Transistor

#### (1) NPN type

Mark	Type number
--	2SC536 2SC945A 2SC1815 2SC1740S
AD	NF, NG PA, QA Y, GR Q, R, S
AE	NF, NG PA, QA, RA O, Y, GR Q, R, S

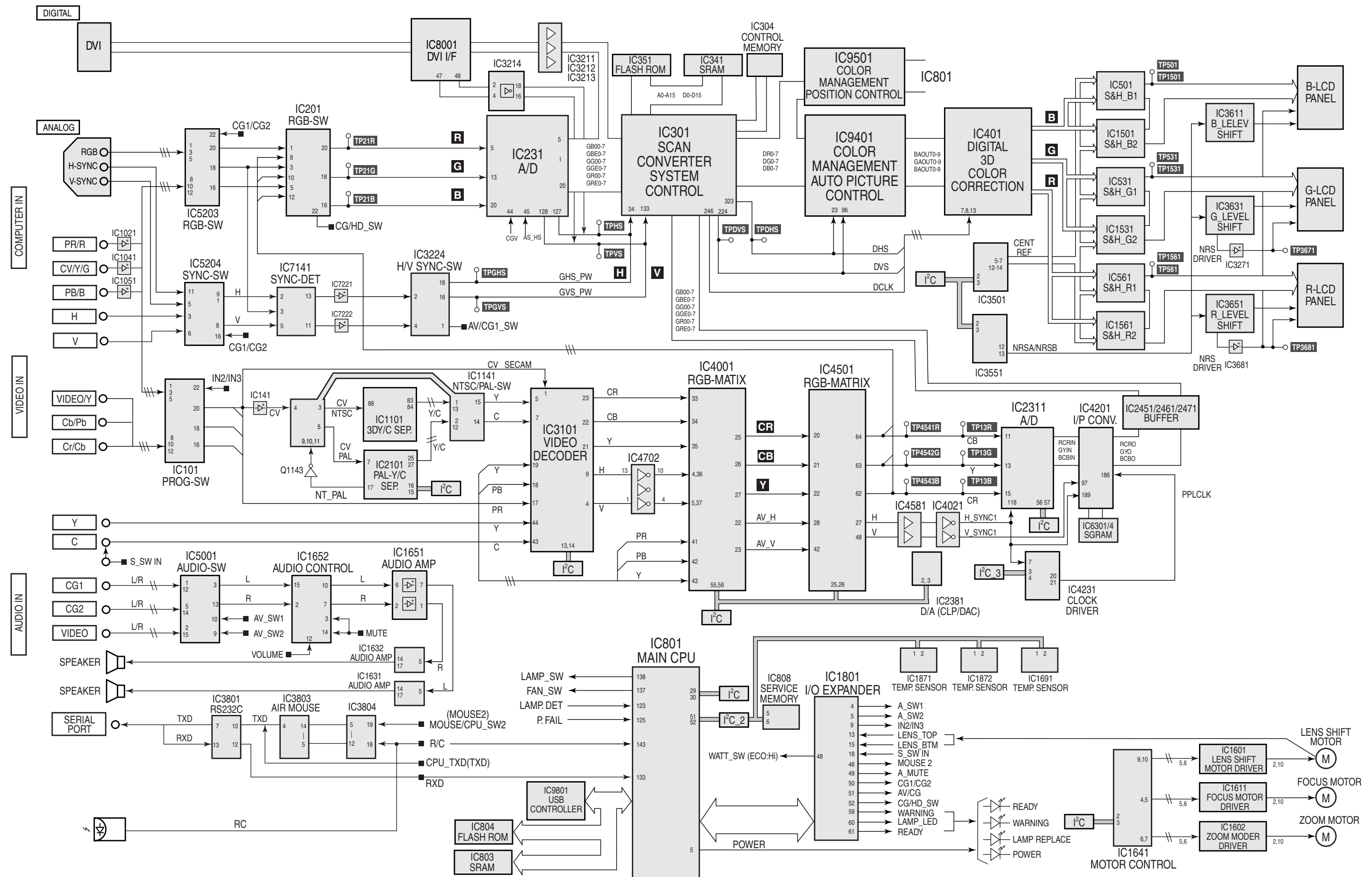
#### (2) PNP type

Mark	Type number
--	2SA608 2SA564A 2SA1015 2SA933S
AB	NF R Y, GR R
AC	NF Q, R O, Y, GR Q, R

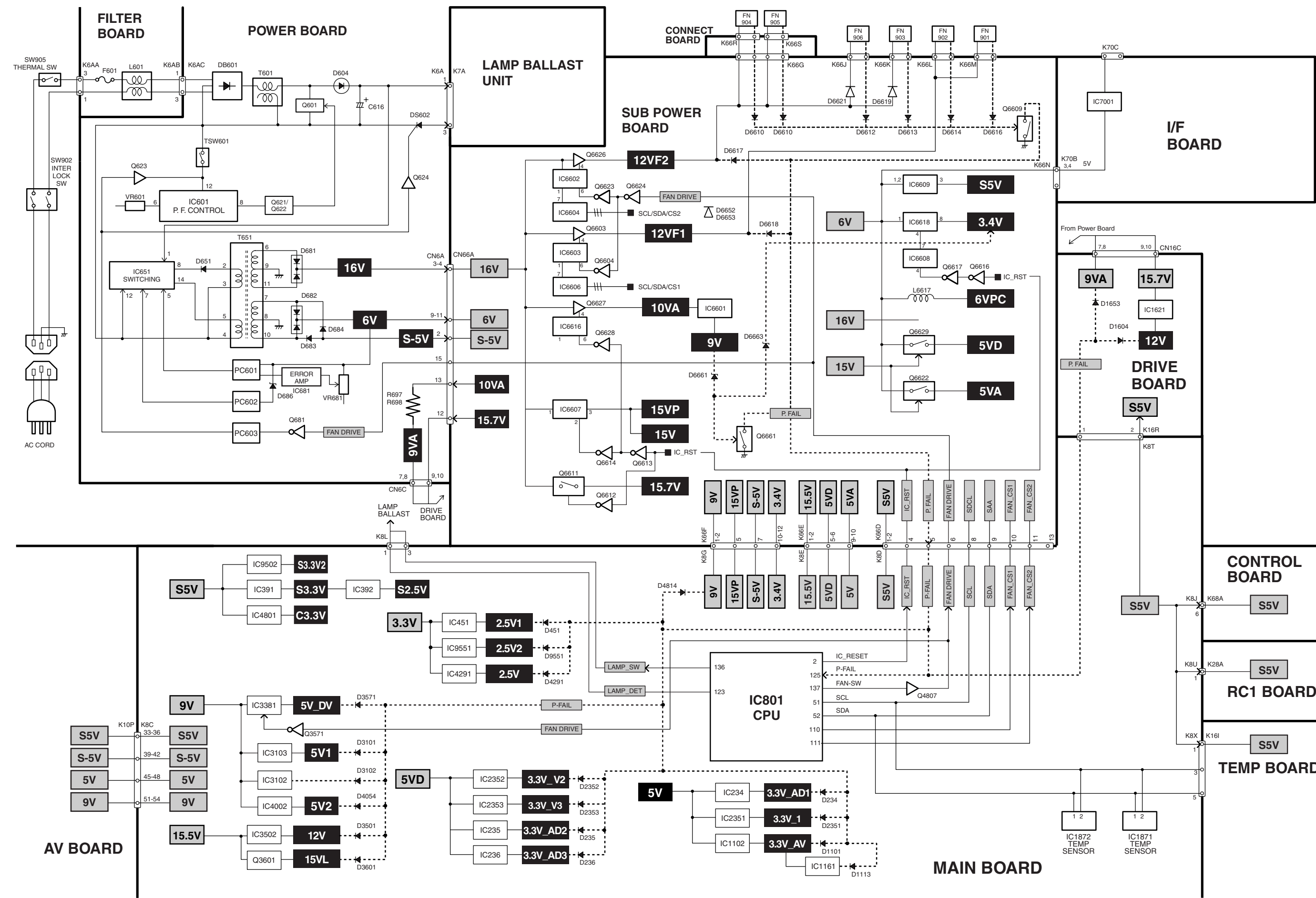
#### (3) Chip type

Mark	Type number
--	2SA1179/N 2SA1037K 2SA1037AK 2SC2812/N 2SC2412K
AJ	M6, M7 R, S R, S
AH	L6, L7 R, S

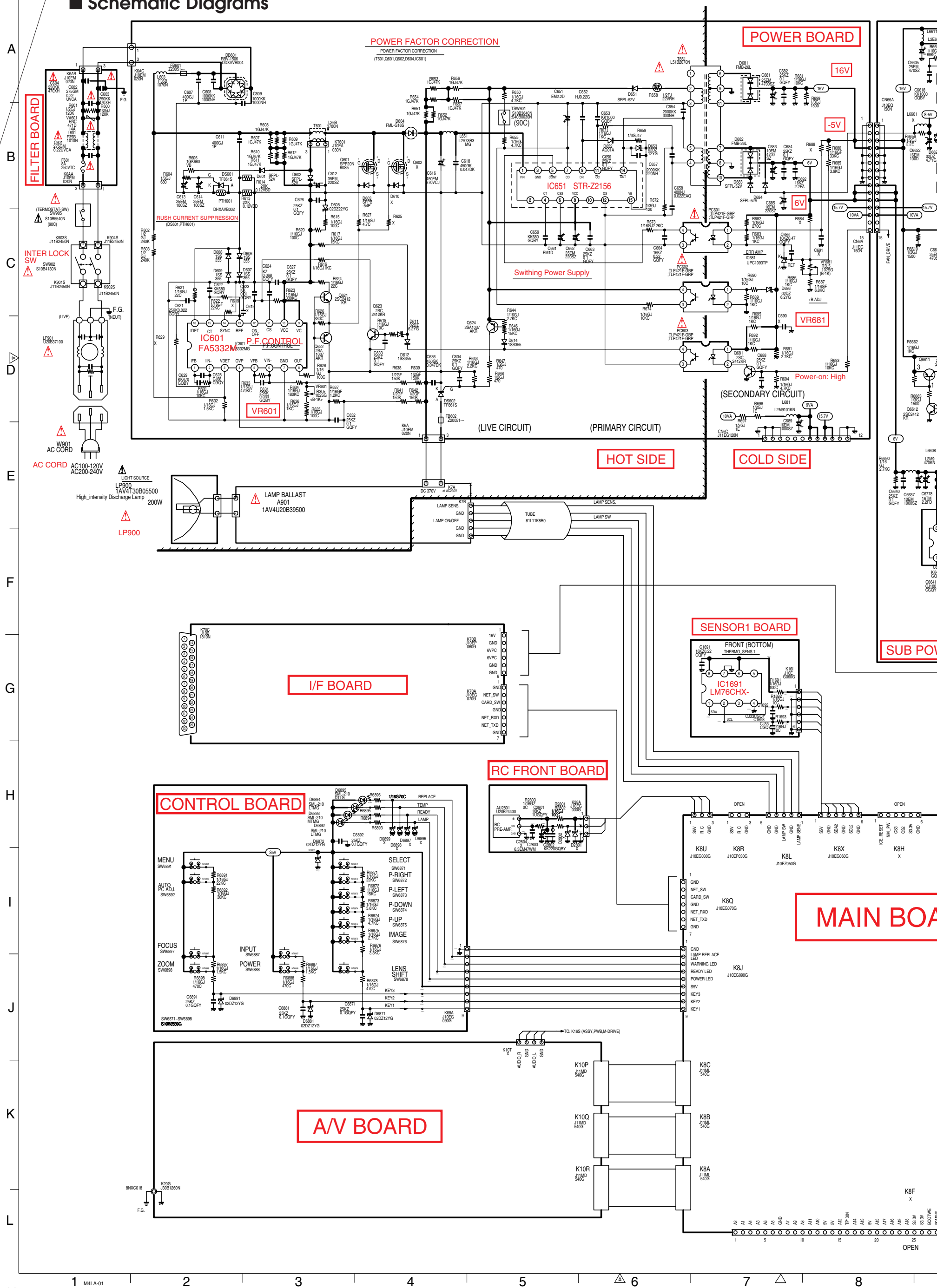
### ■ Circuit Block Diagram



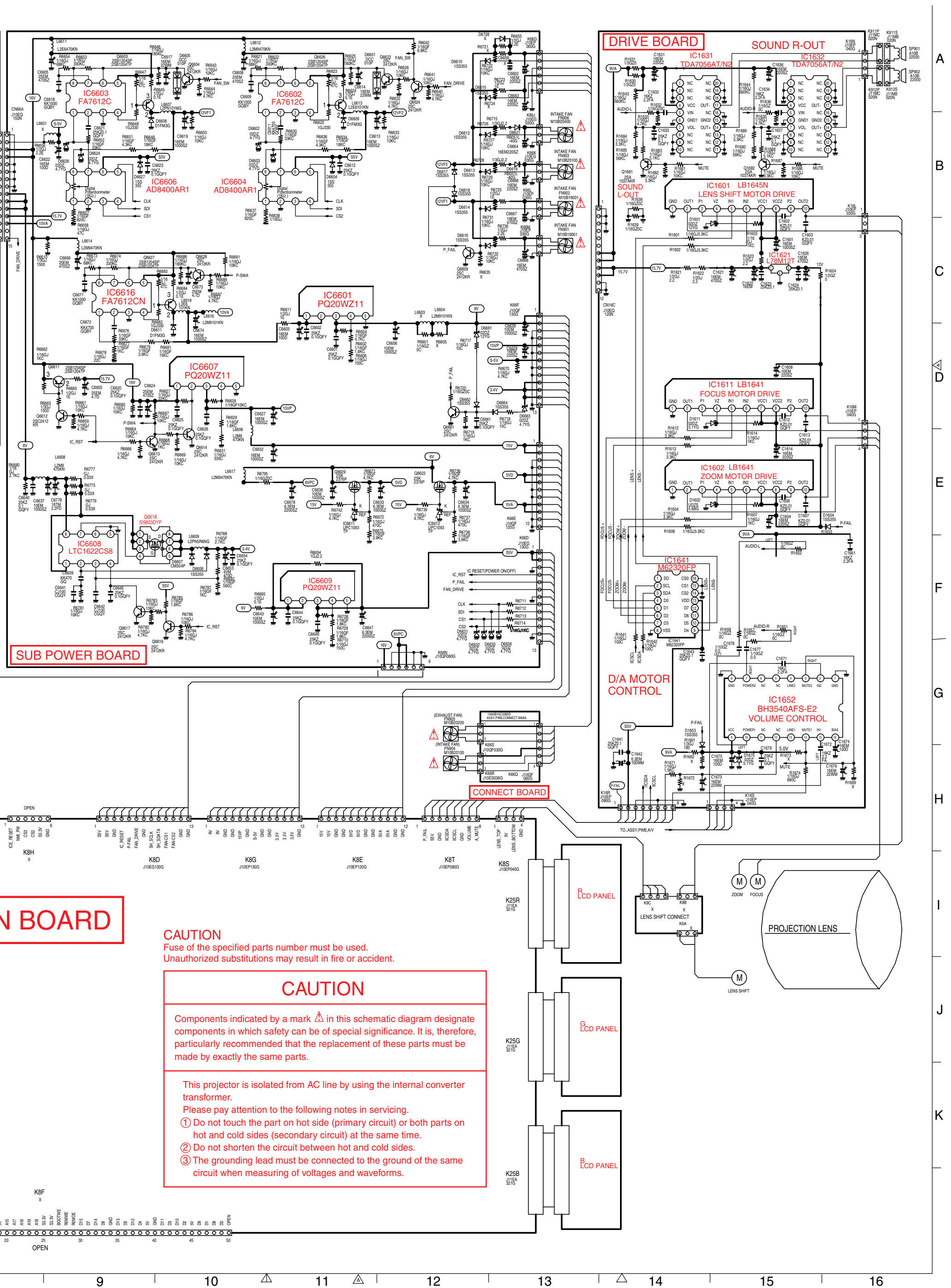
■ Power Supply Lines



## ■ Schematic Diagrams









A

B

C

D

E

F

G

H

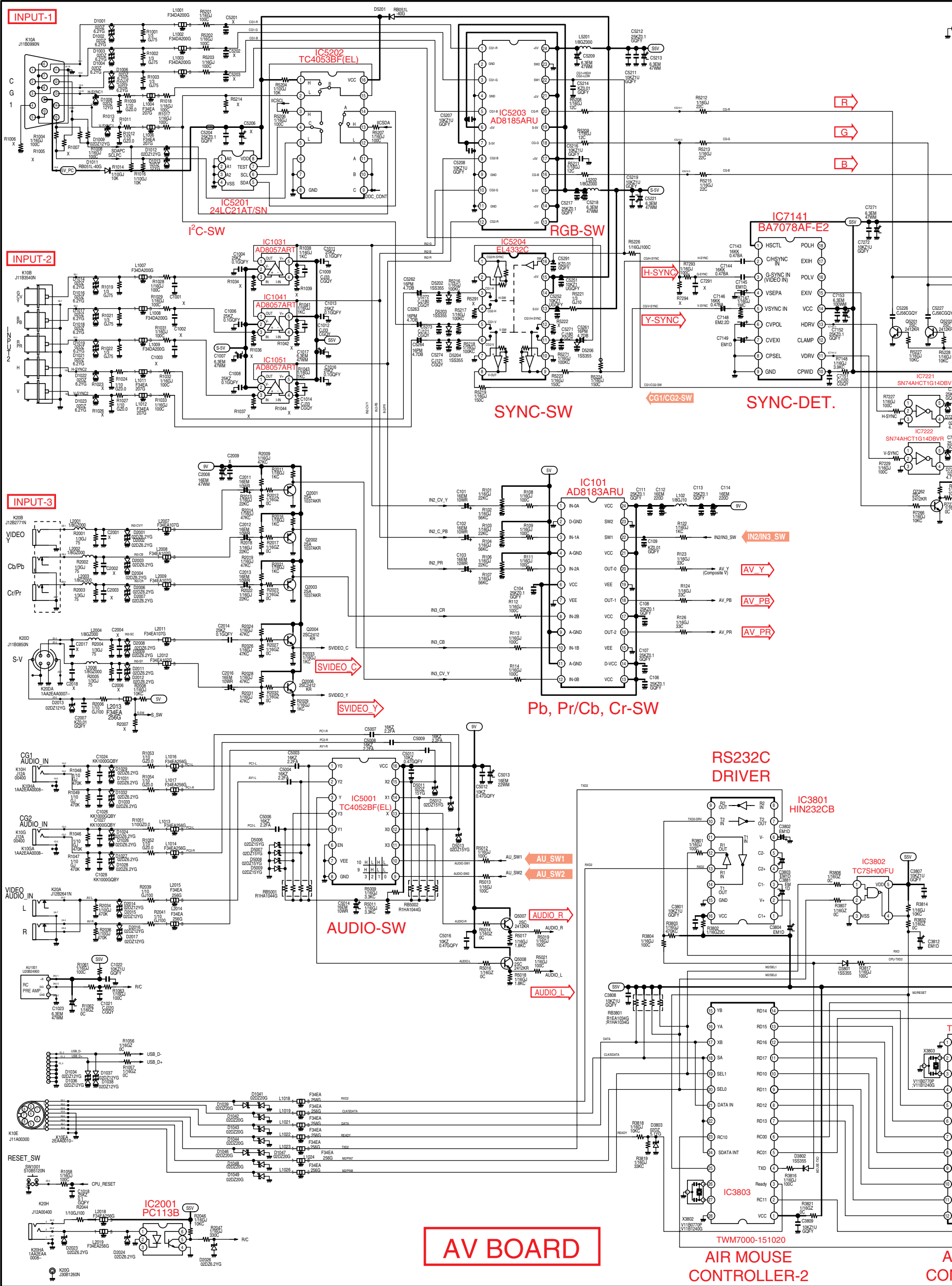
I

J

K

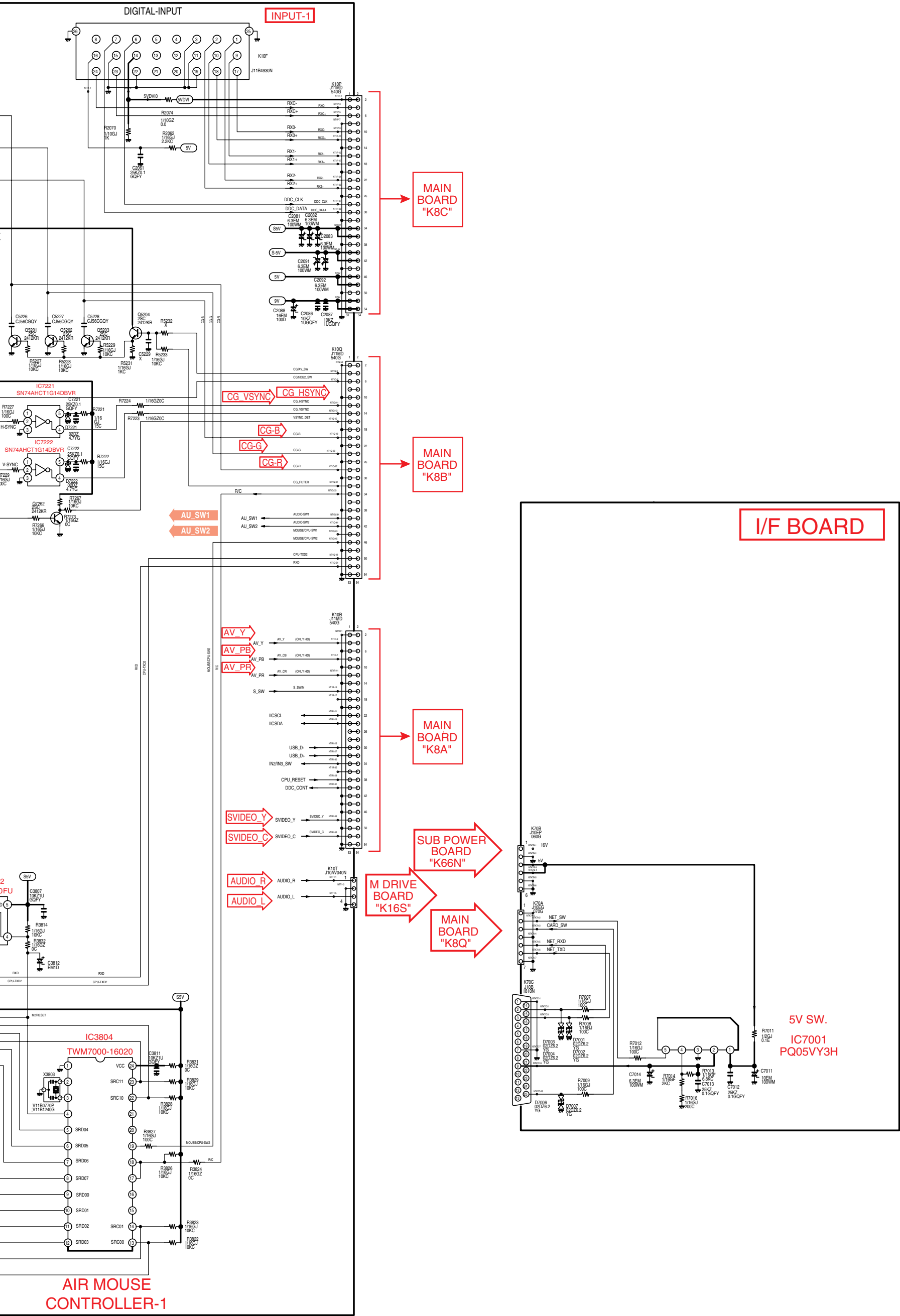
L

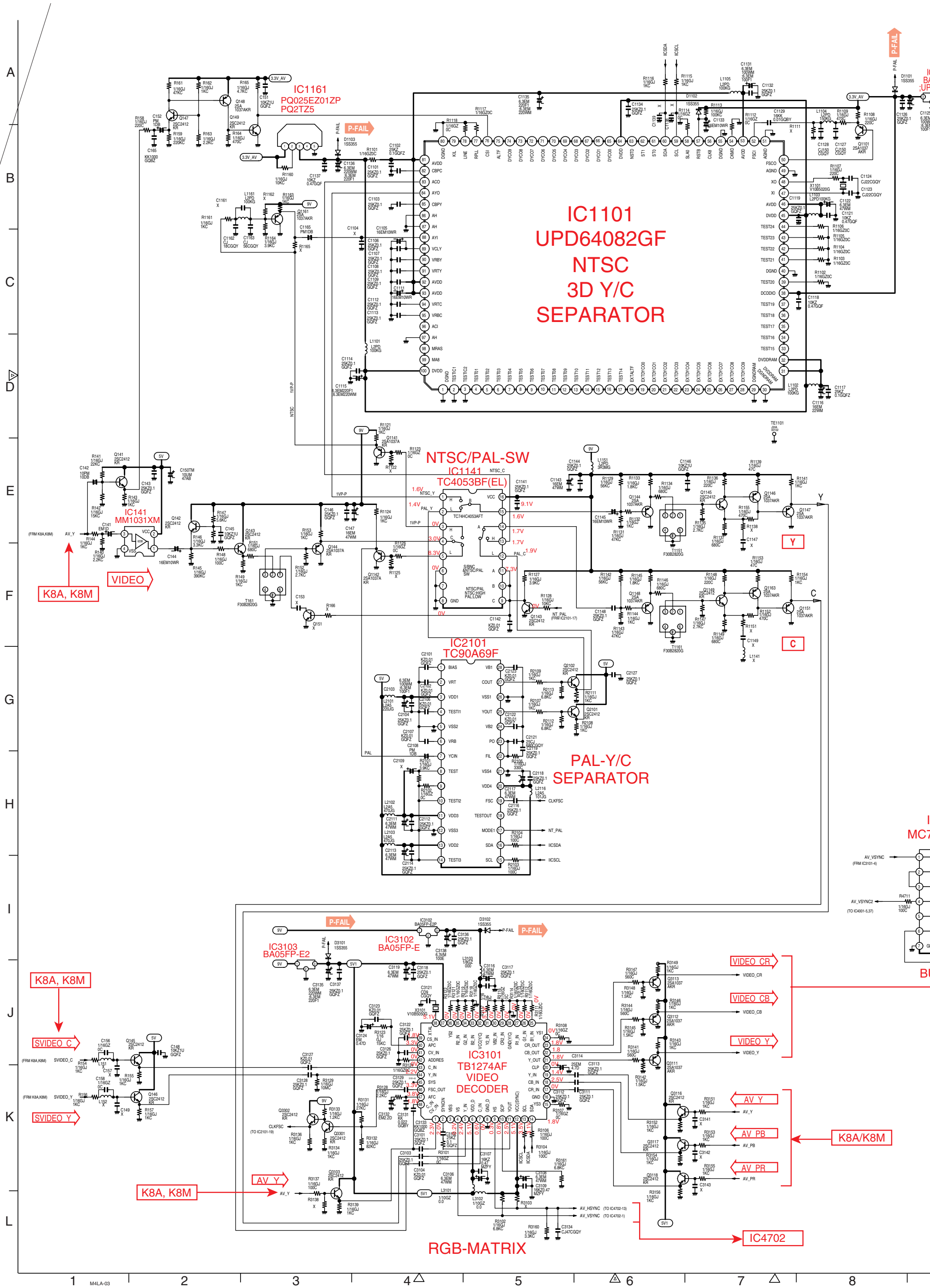
A6

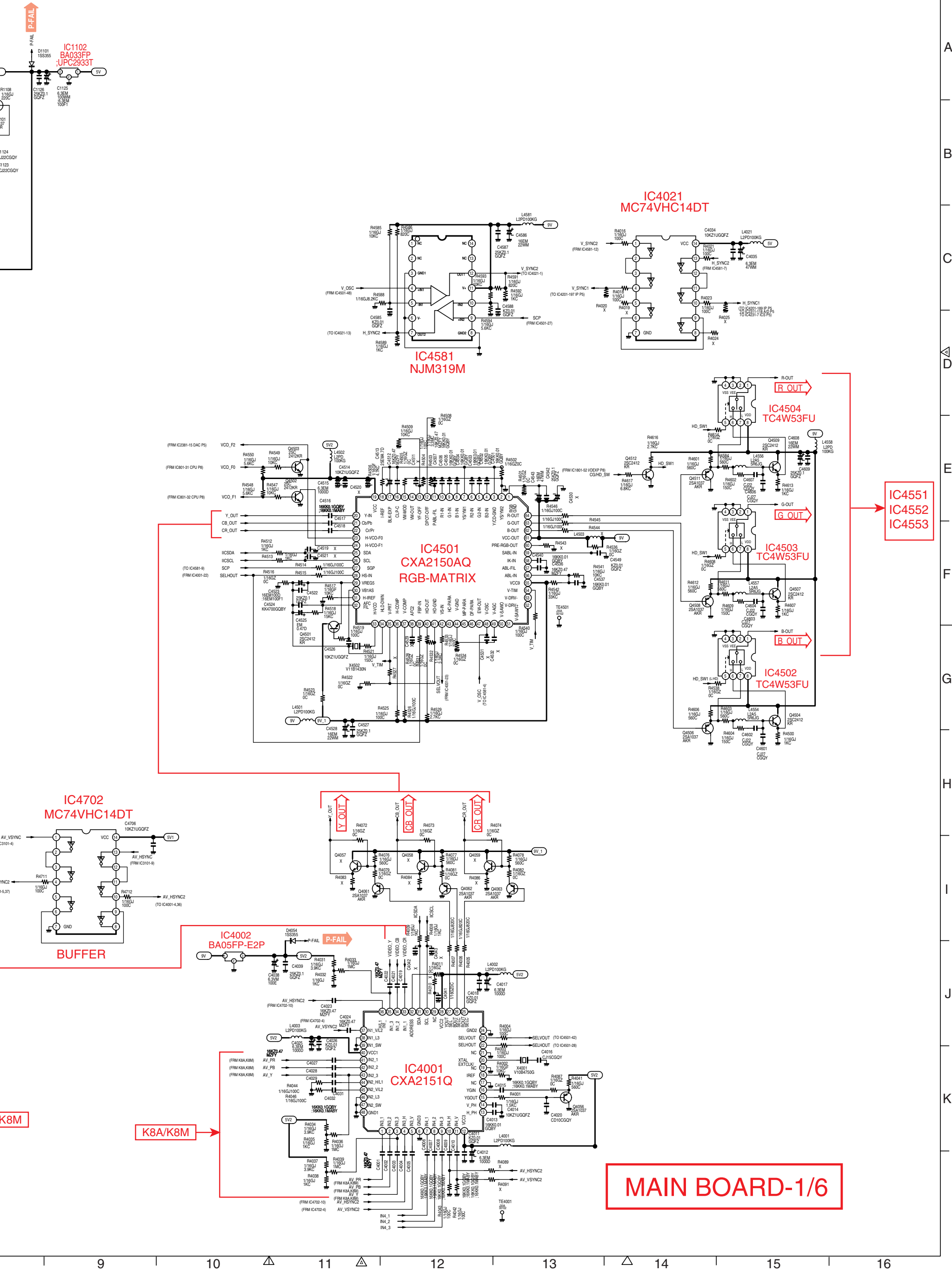


AV BOARD

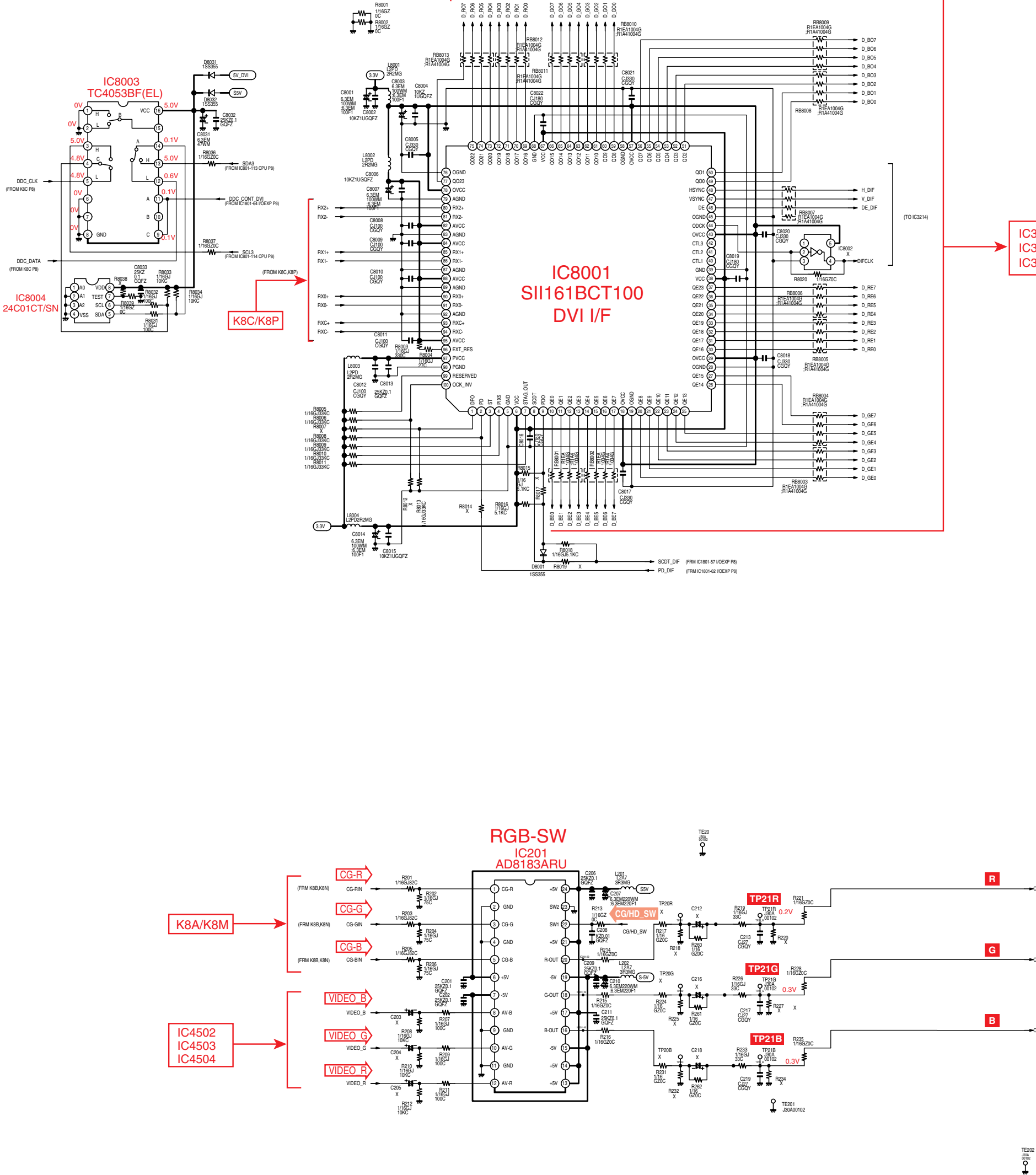
AIR MOUSE  
CONTROLLER-2







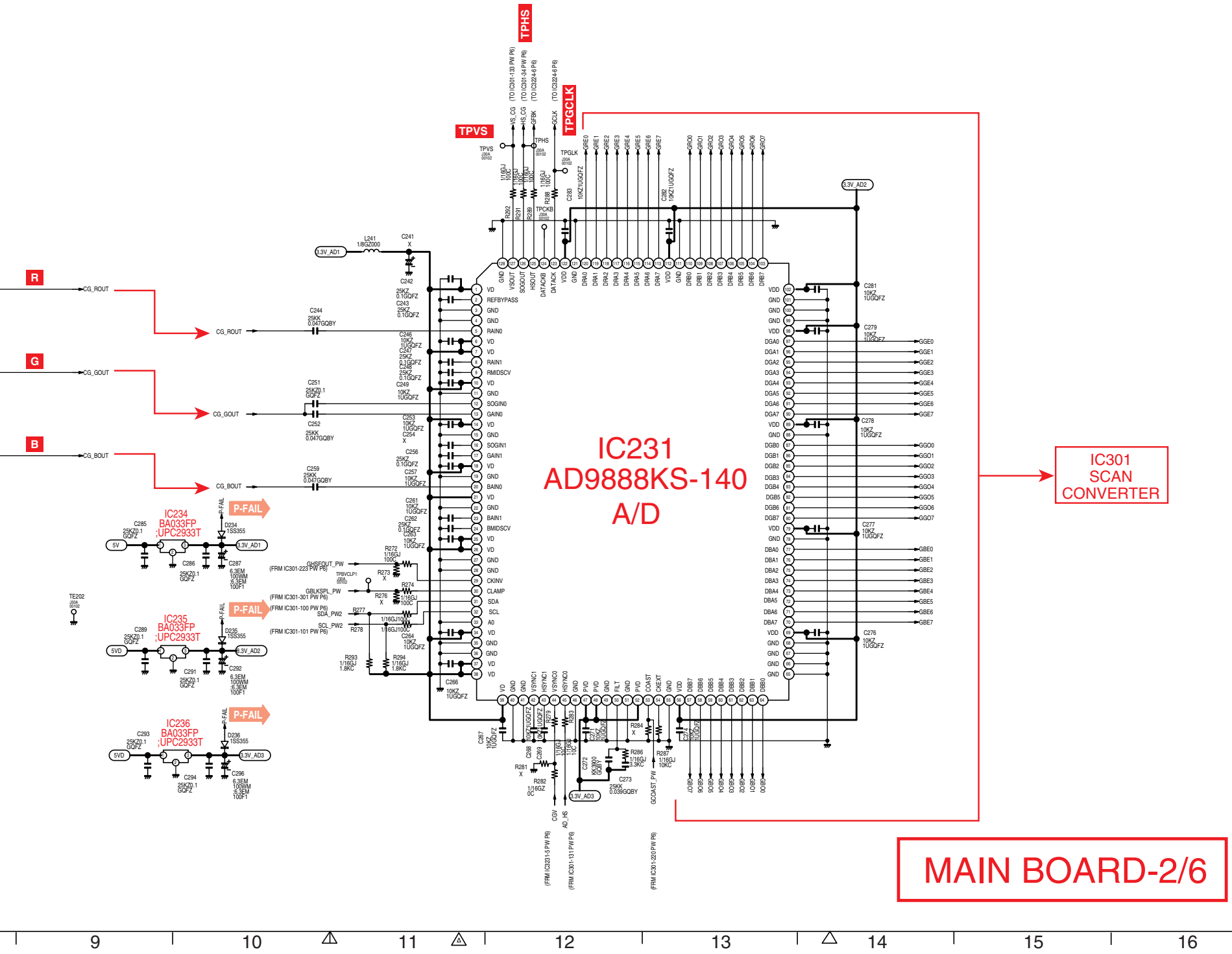




IC3211

IC3212

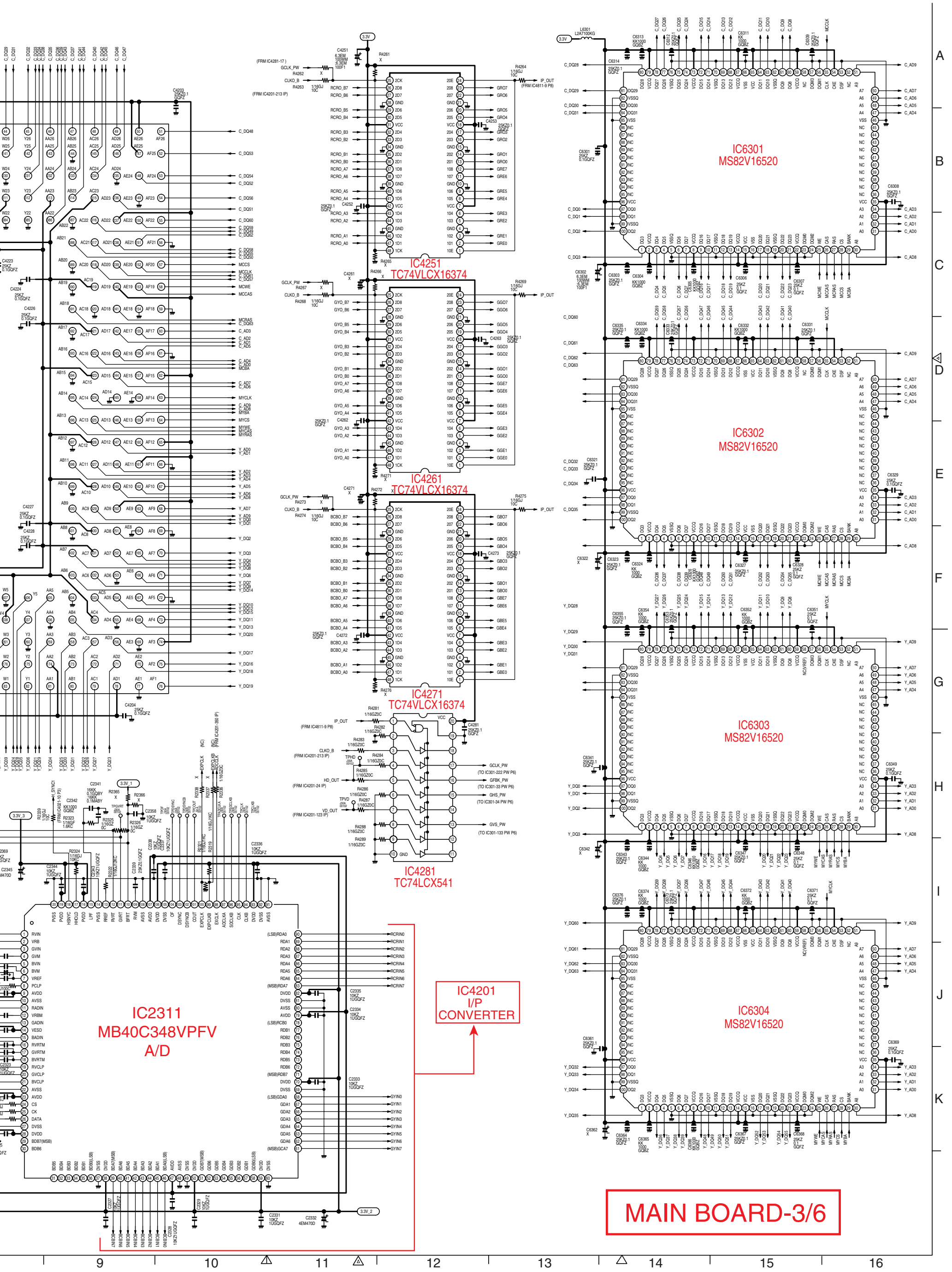
IC3213

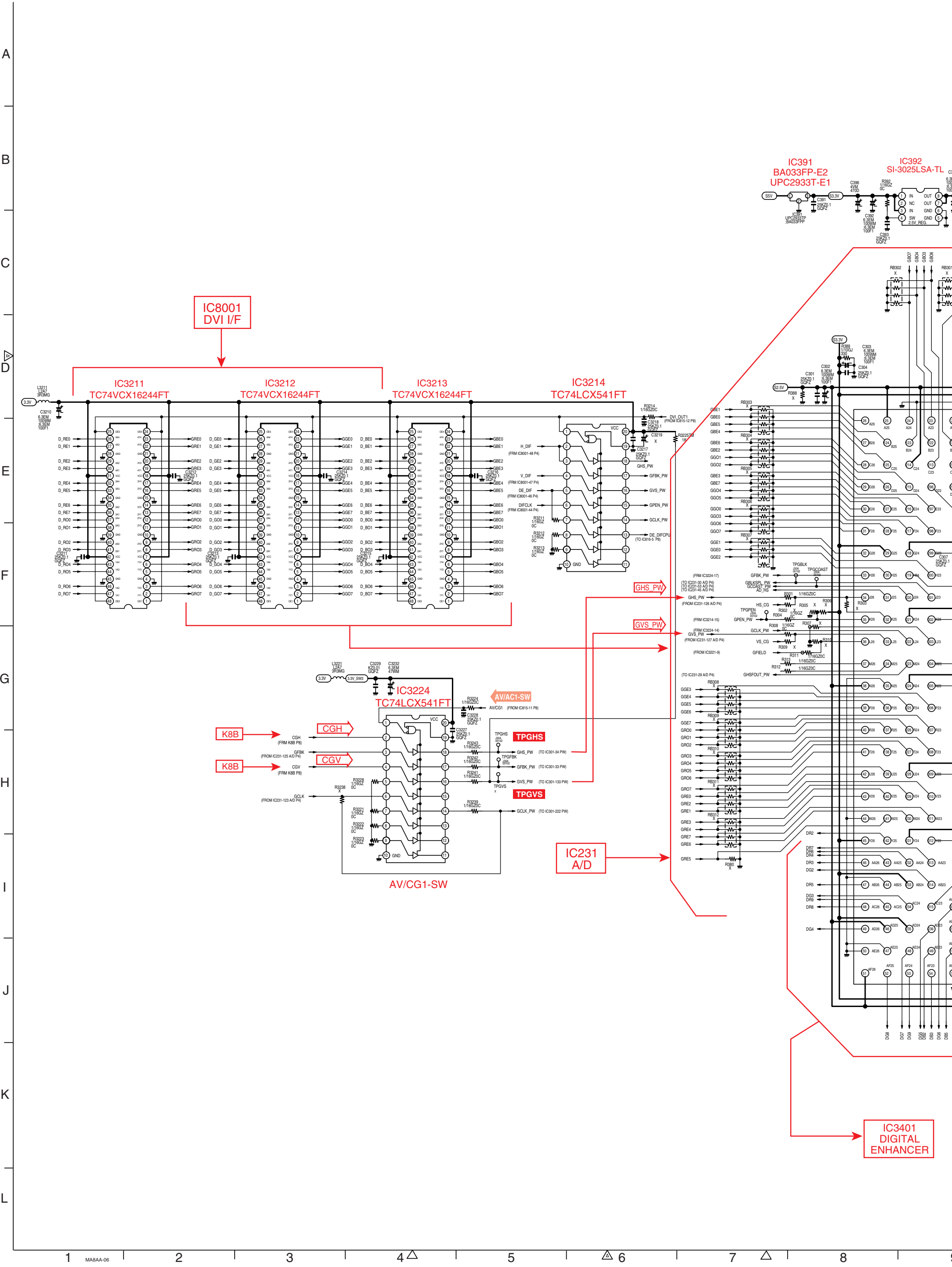


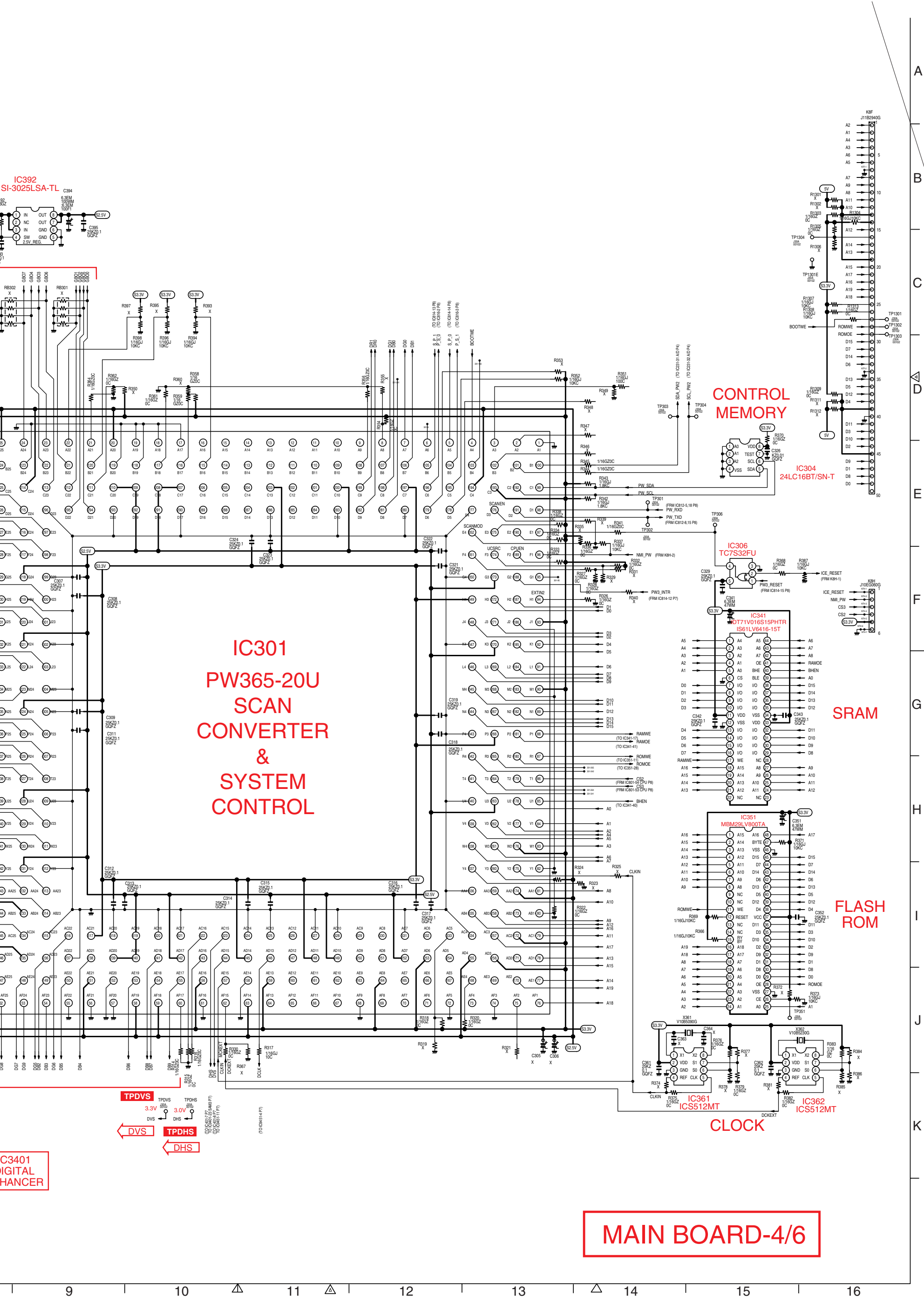
MAIN BOARD-2/6



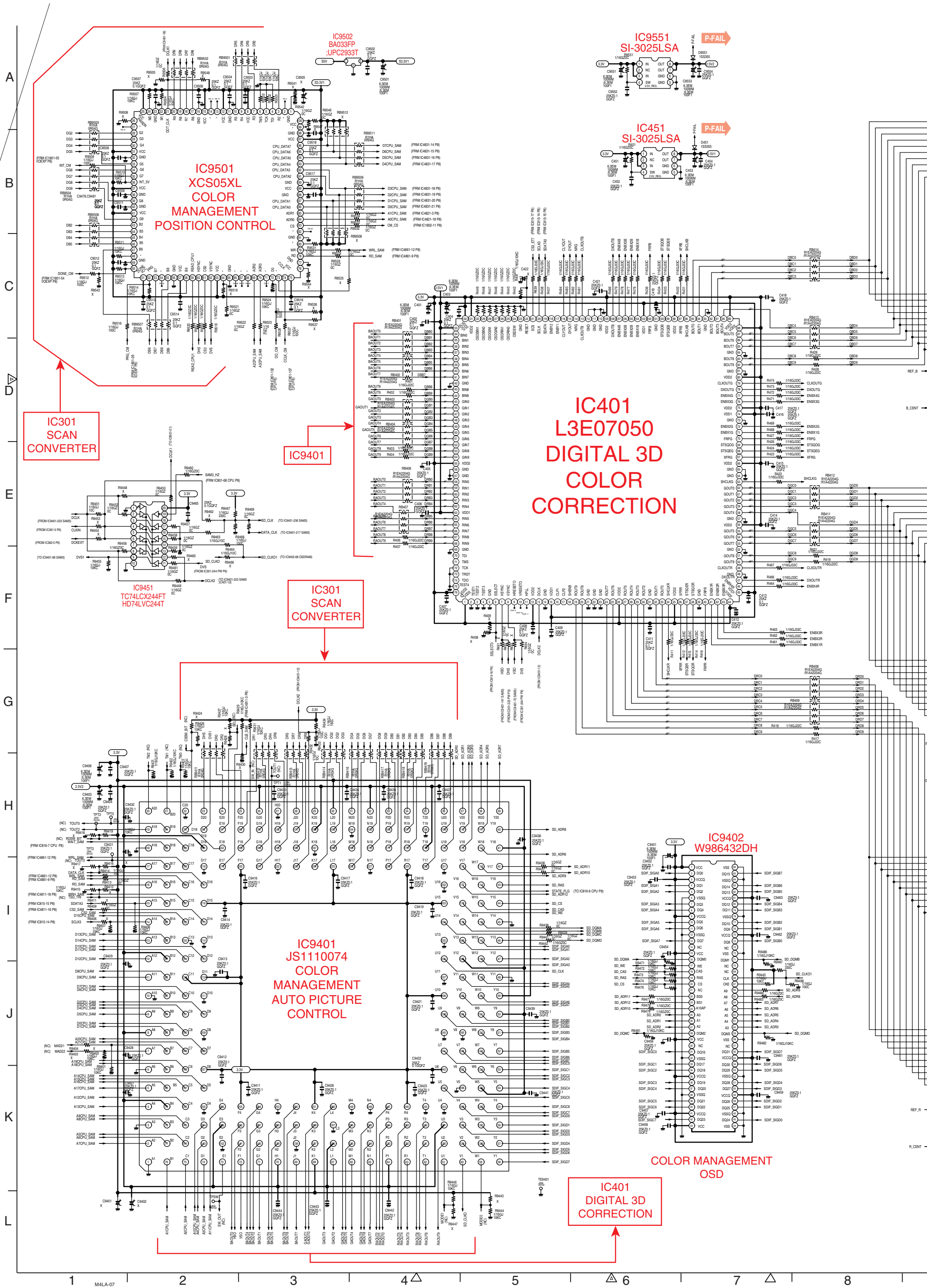


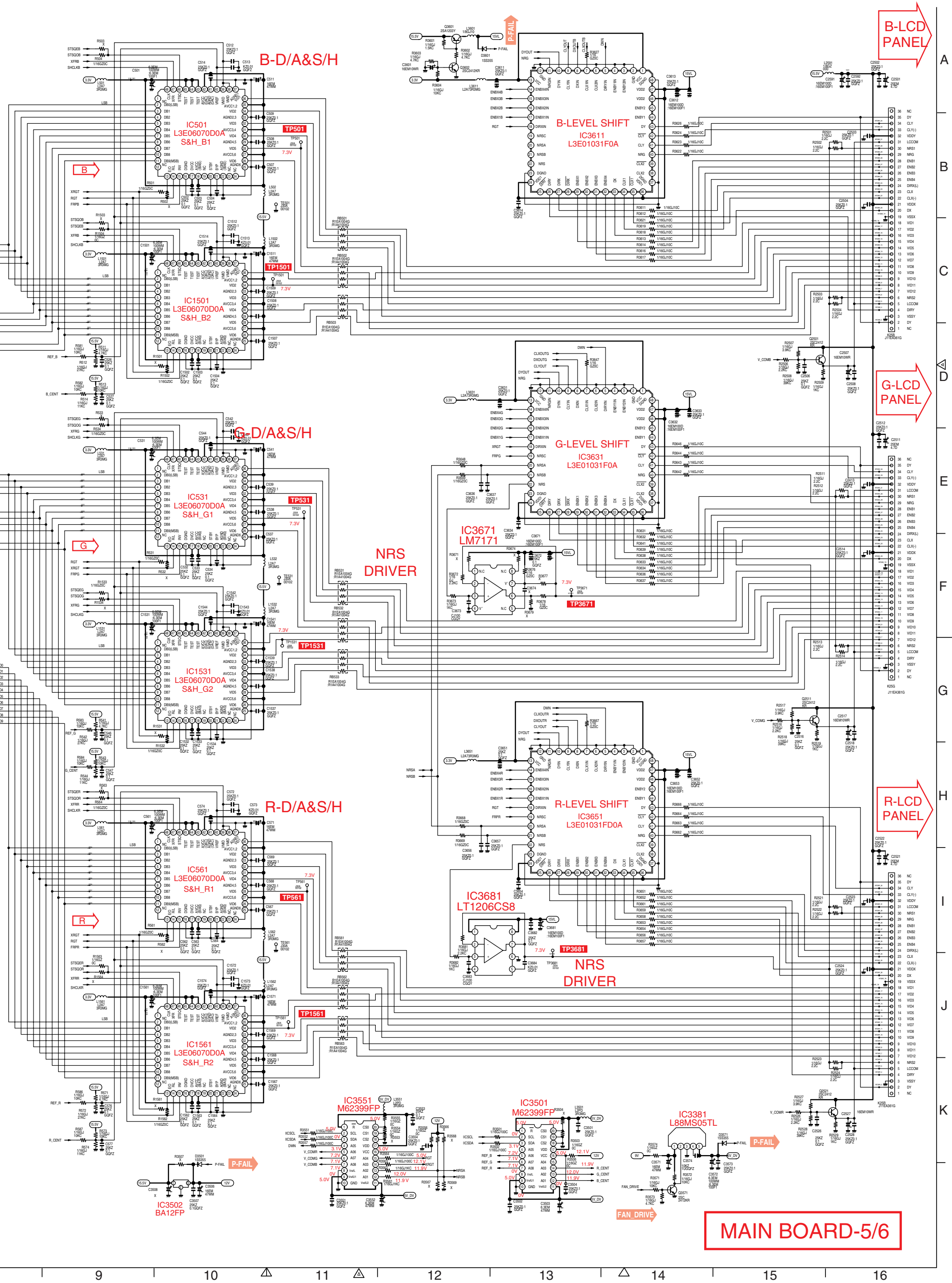




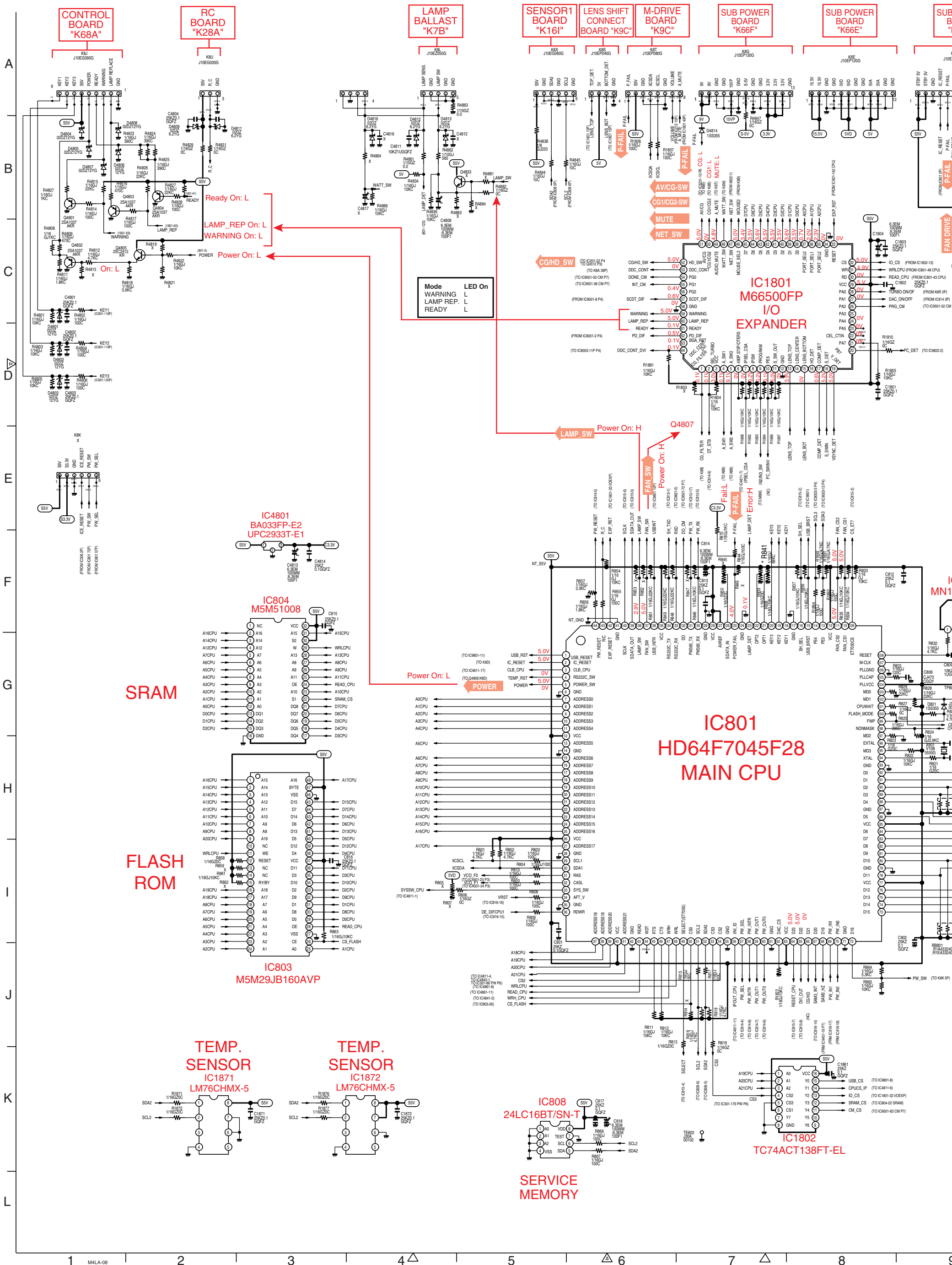


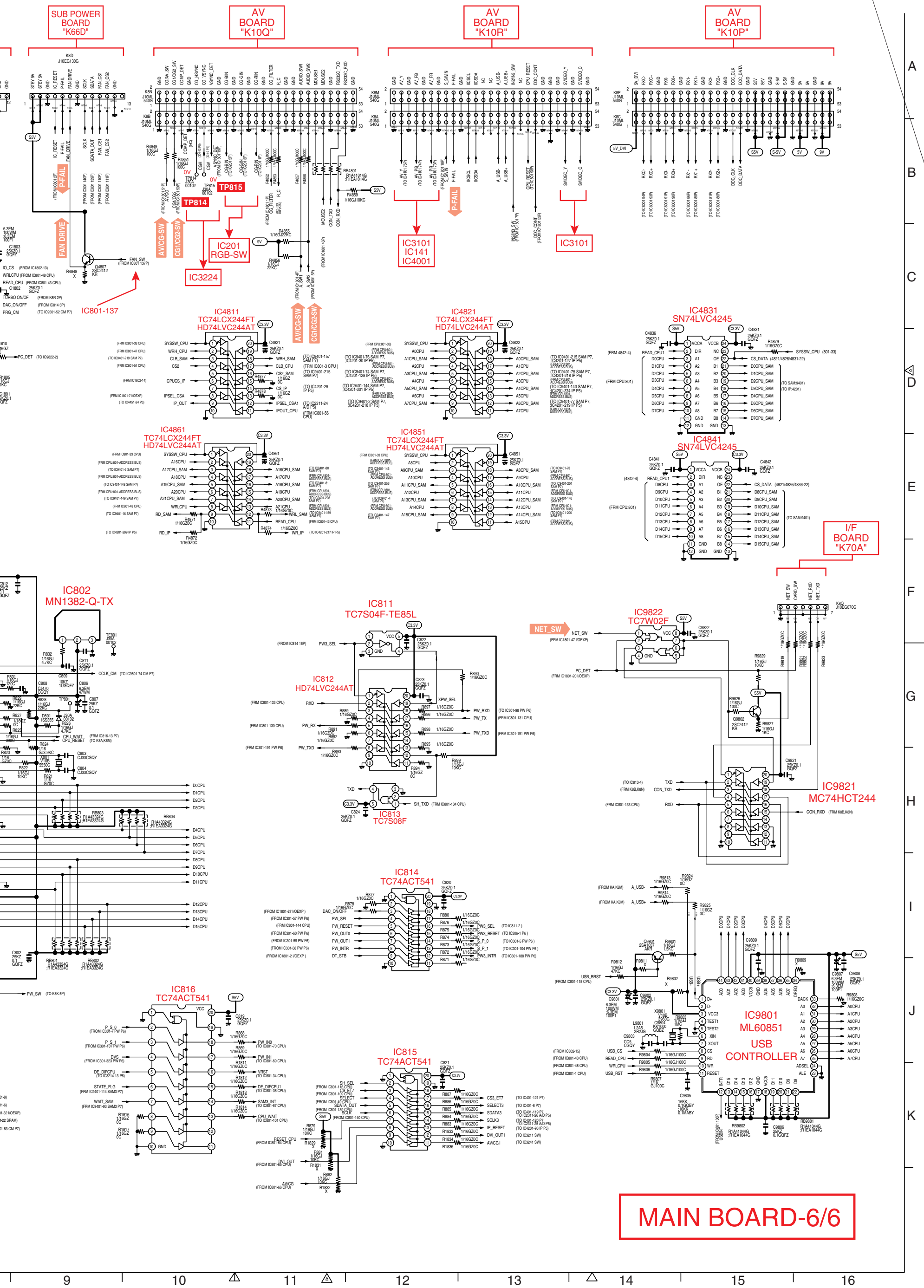














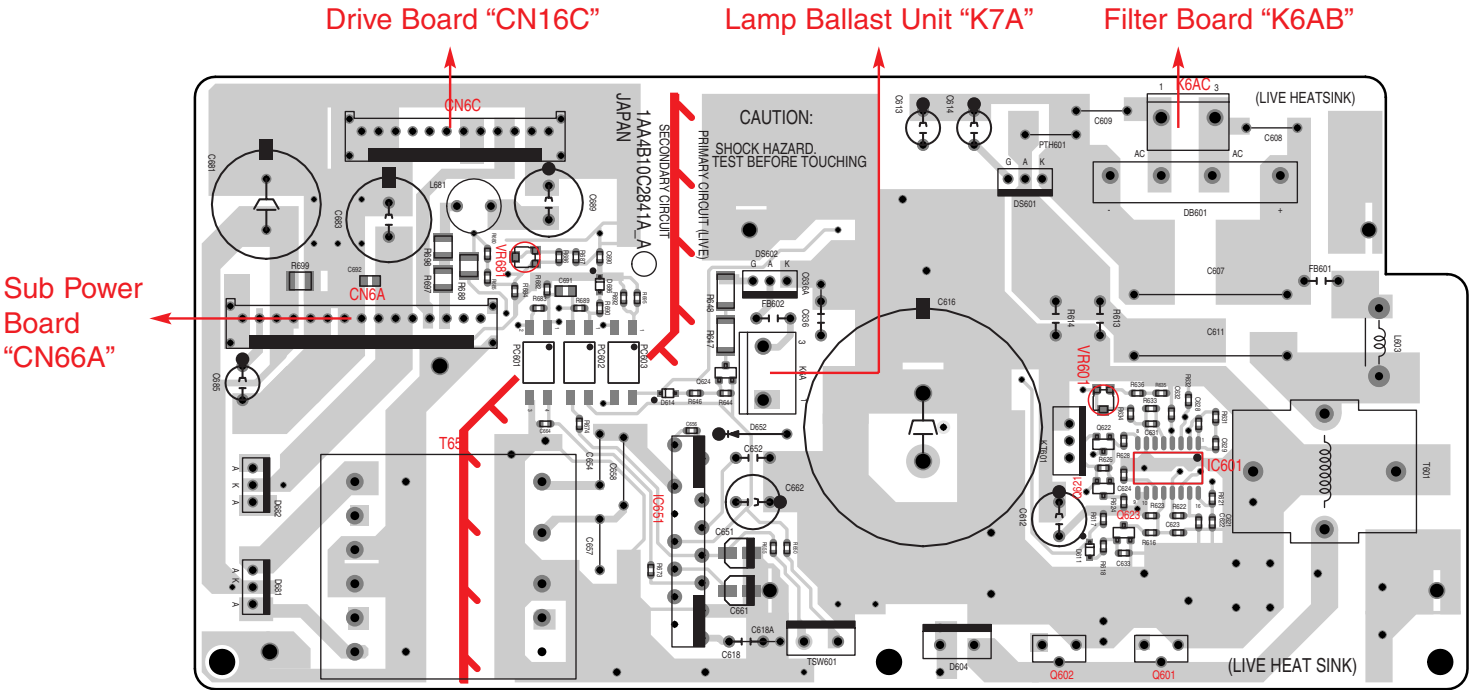
Printed Wiring Board Diagrams

CAUTION

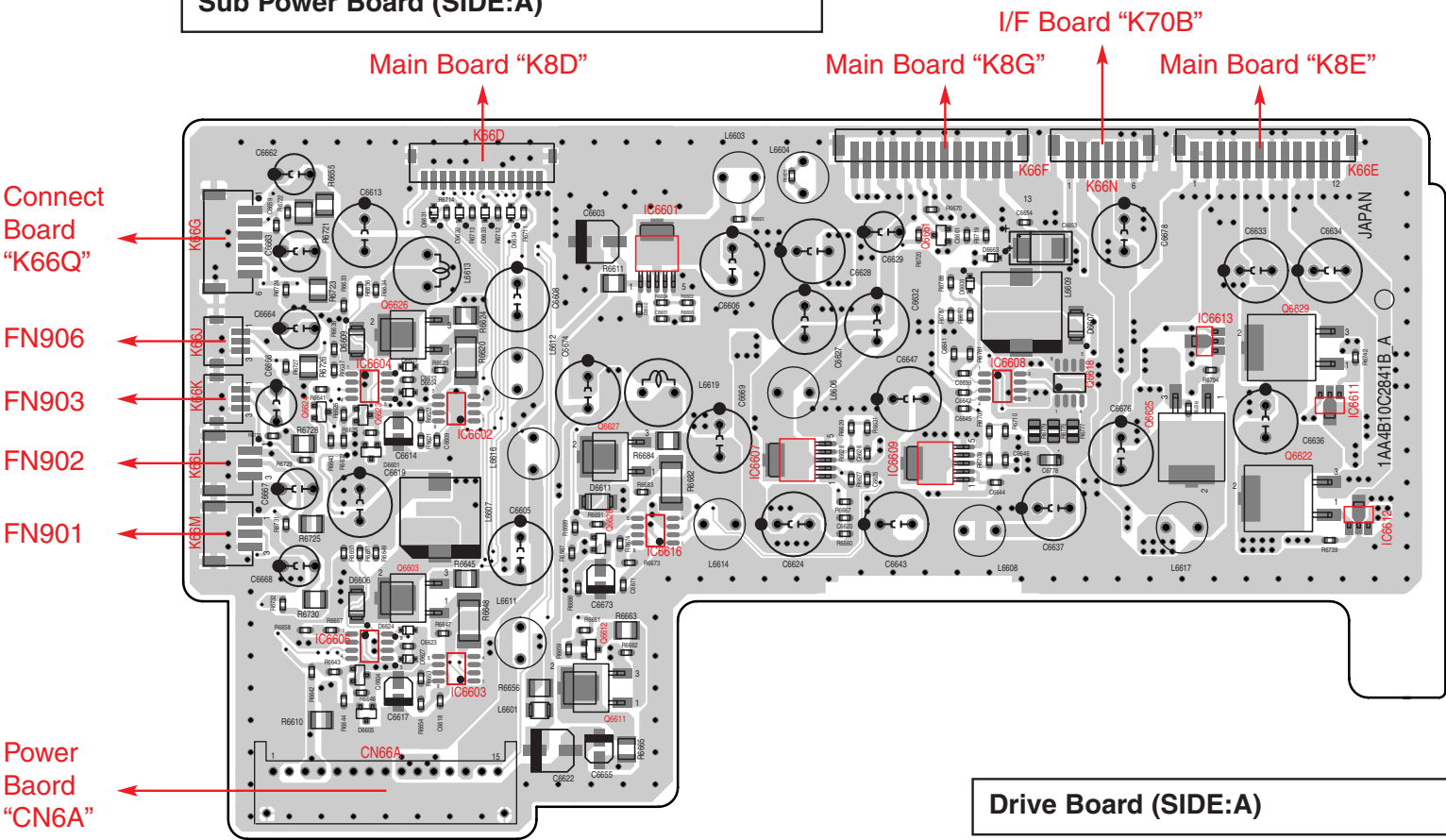
This projector is isolated from AC line by using the internal converter transformer. Please pay attention to the following notes in servicing

1. Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time.
2. Do not shorten the circuit between hot and cold sides.
3. The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

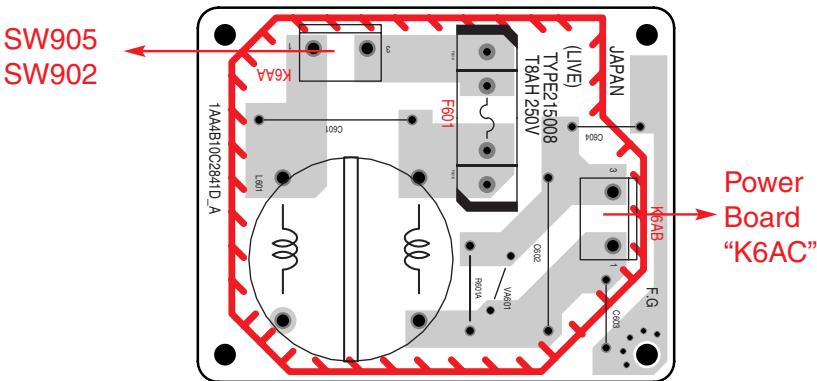
Power Board (SIDE:A)



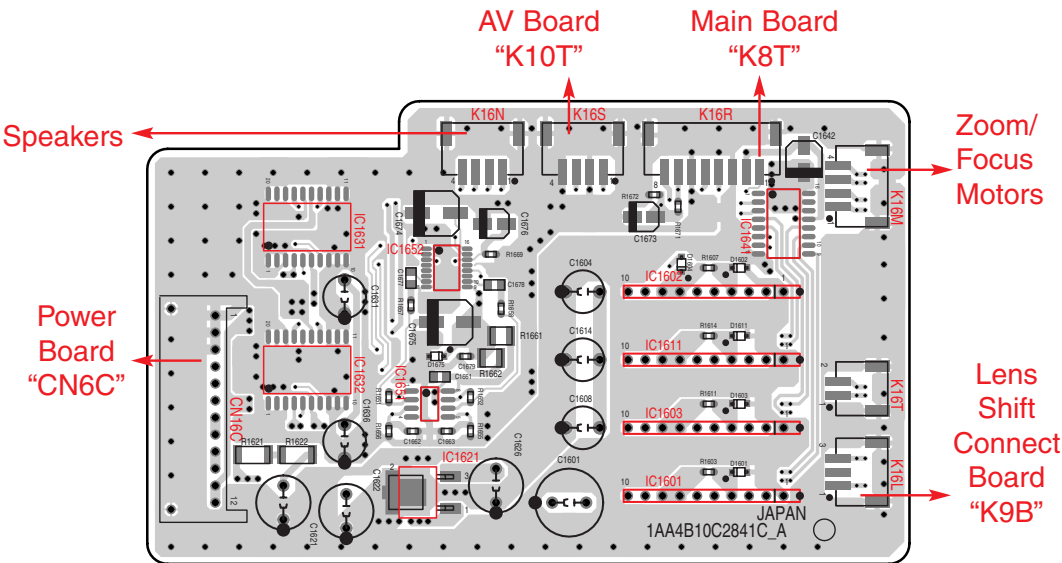
Sub Power Board (SIDE:A)



Filter Board (SIDE:A)



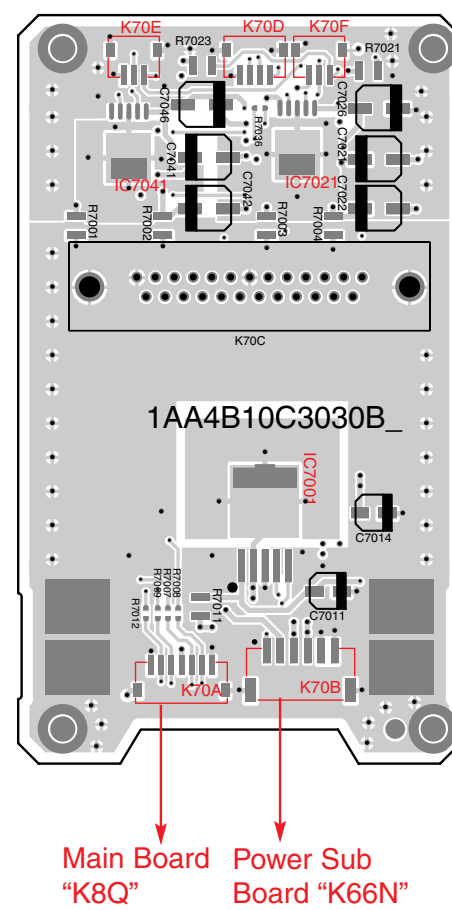
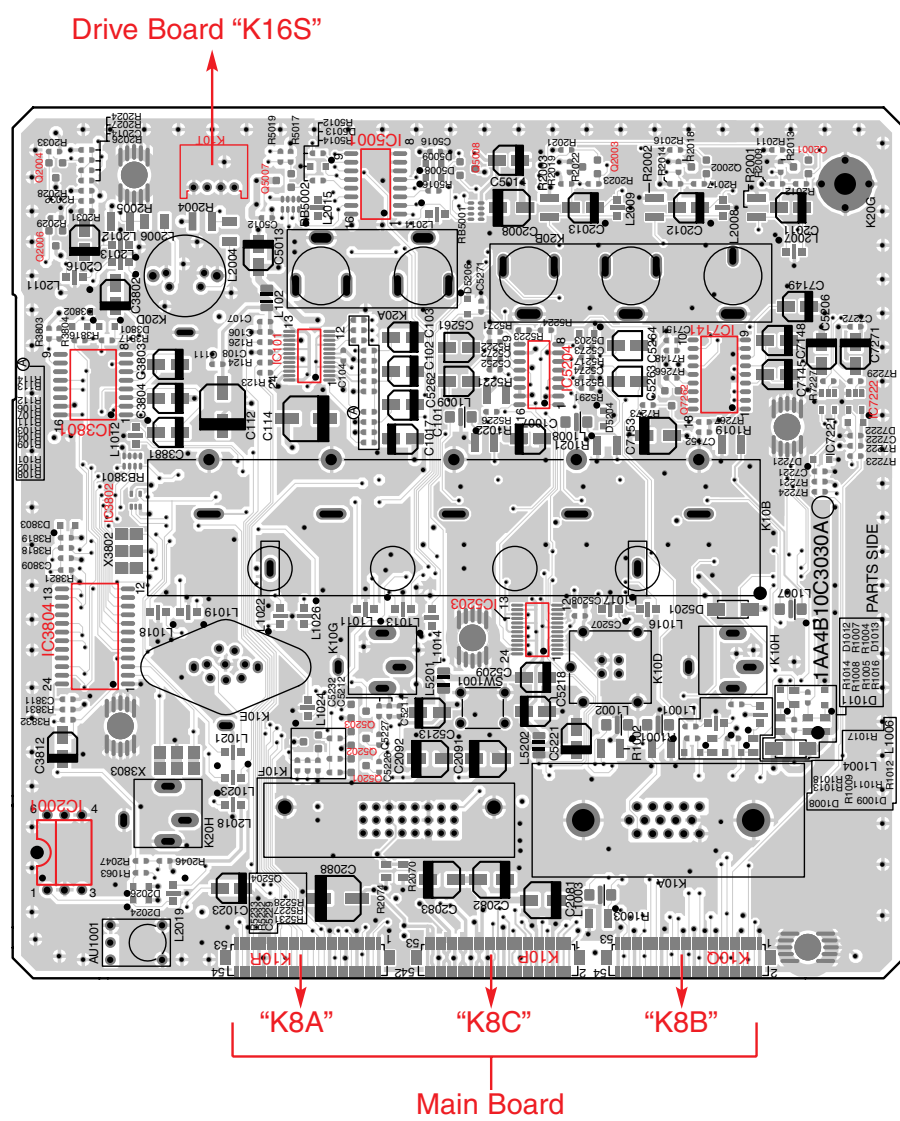
Drive Board (SIDE:A)





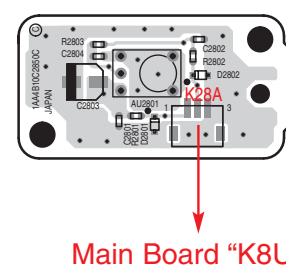
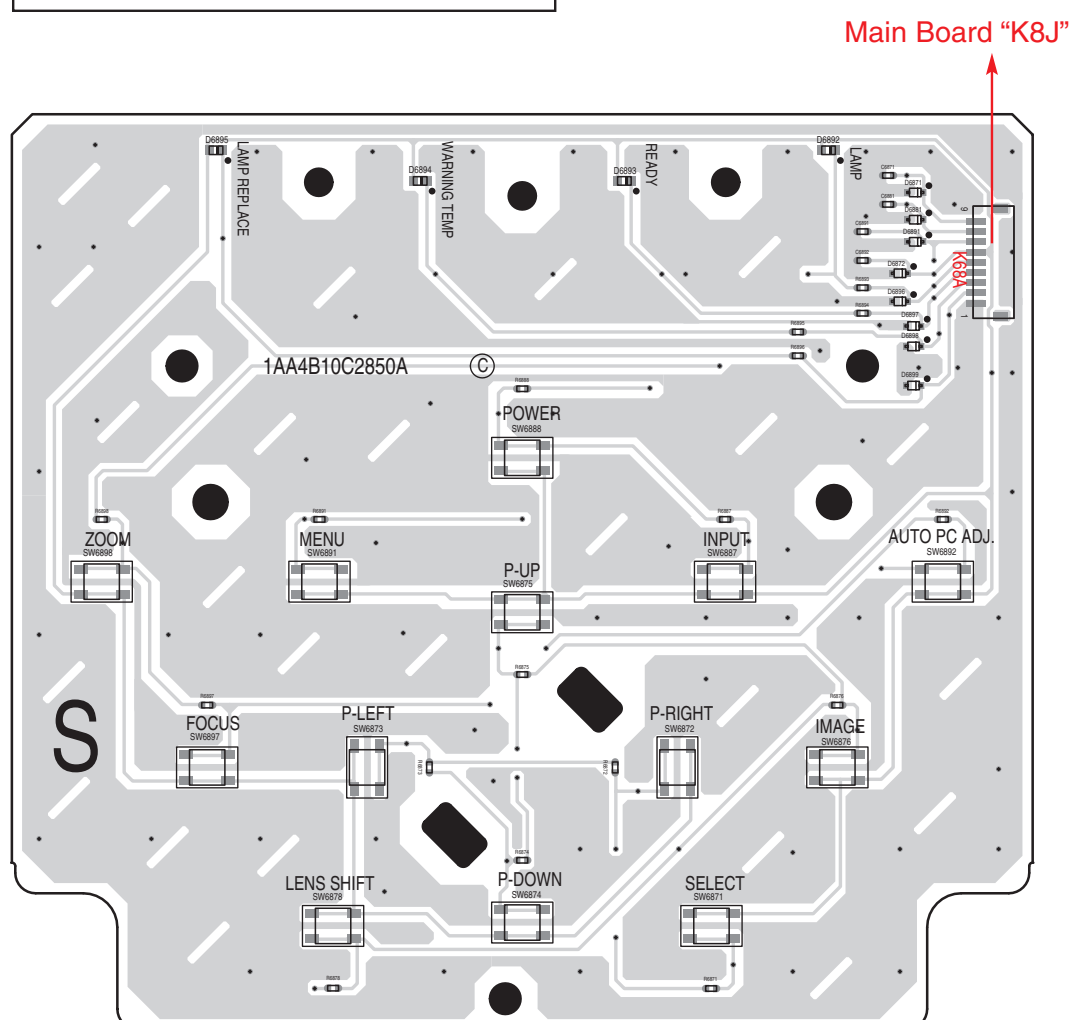
### AV Board (SIDE:A)

I/F Board (SIDE:A)

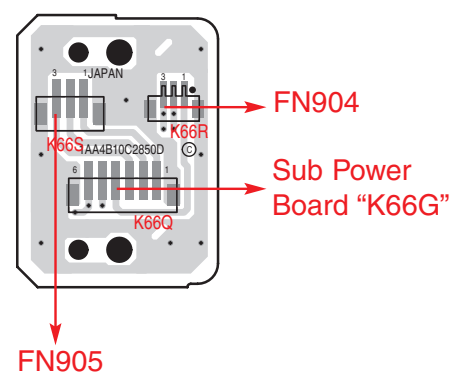


### Control Board (SIDE:A)

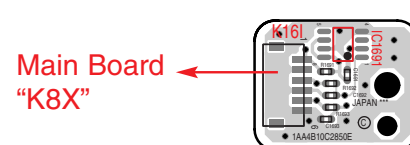
### RC Front Board (SIDE:A)



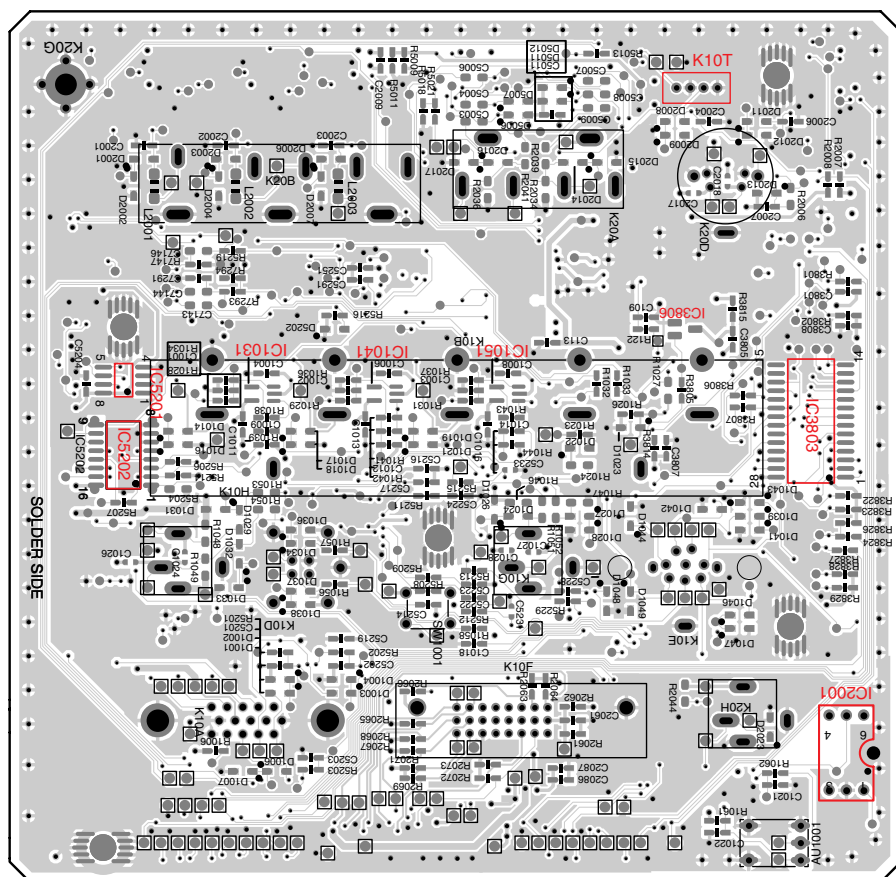
### Connect Board (SIDE:A)



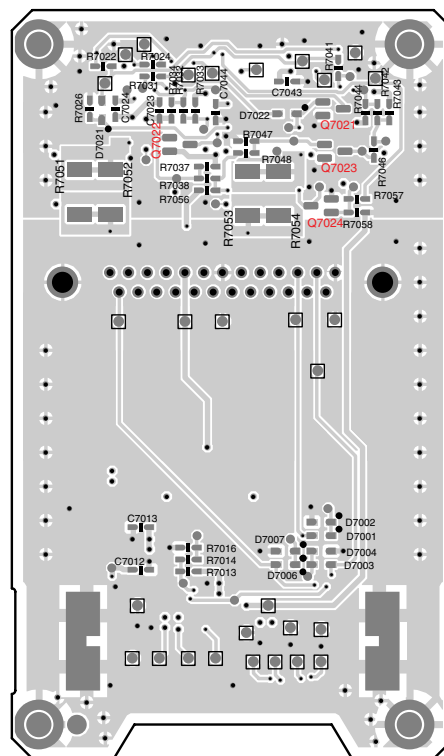
### Sensor1 Board (SIDE:A)



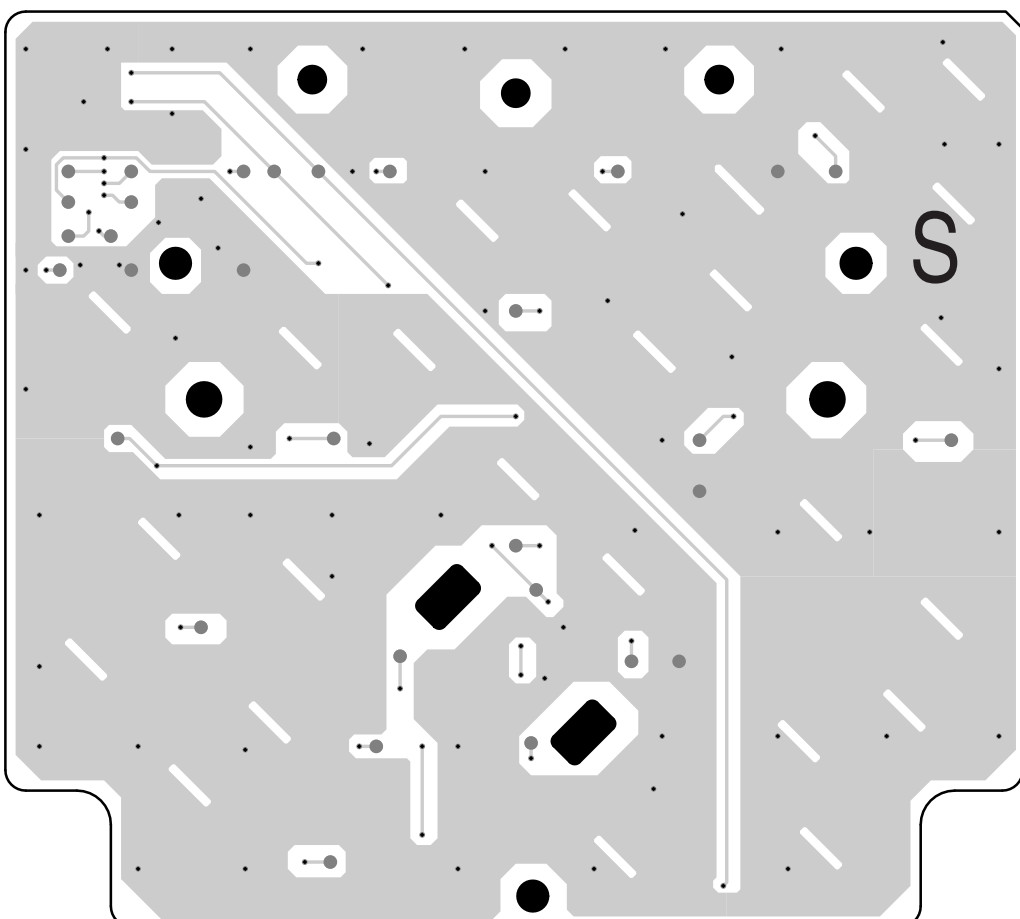
### AV Board (SIDE:B)



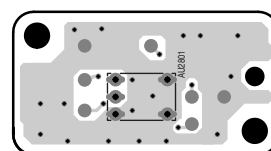
### I/F Board (SIDE:B)



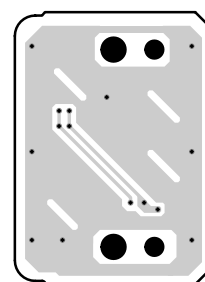
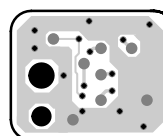
### Control Board (SIDE:B)



RC Front Board (SIDE:B)



### Connect Board (SIDE:B)

**Sensor1 Board (SIDE:B)**



## Main Board (SIDE:A)

